Vol. X, No. 3 March, 1941

# JOURNAL

OF THE

# ANNAMALAI UNIVERSITY

EDITOR

PROFESSOR B. V. NARAYANASWAMI NAIDU, M.A., B.COM., PH.D.,
BAR-AT-LAW

EDITORIAL BOARD

PROFESSOR C. S. SRINIVASACHARIAR, M.A.

PROFESSOR A. NARASINGA RAO, M.A., L.T., D.Sc., F.A.Sc.

PROFESSOR S. RAMACHANDRA RAO, M.A., D.Sc., F.INST.P., PH.D.

PROFESSOR R. RAMANUJACHARI, M.A.

PUBLISHED BY THE UNIVERSITY

ANNAMALAINAGAR

1941

# NOTICE

## To contributors and others

Contributions, remittances, books for review, exchanges and correspondence regarding all matters may be addressed to:—


**Dr. B. V. Narayanaswami Naidu**

*Economics Department,*

*Annamalai University,*

*Annamalainagar.*

## CONTENTS


PAGE

1. Some Problems of Higher Education in India
*By A. C. Subrahmanyan* .. 287

2. The Nayaks of Tanjore
*By V. Vridhagirisan, M.A., M.Litt.* .. 299

3. The Hormic Theory
*By P. S. Naidu, M.A.* .. 325

4. Studies in Sanskrit Texts on Temple Architecture with Special Reference to the Tantrasamuccaya
*By N. V. Mallayya, M.A., M.Litt.* .. 341

5. Bhāvanāviveka with Viṣamagranthibhedikā
*By V. A. Ramaswami Sastri and K. A. Sivaramakrishna Sastri*

6. Prameyamālā
*By R. Ramanujachariar, M.A., and K. Srinivasachariar*

7. Reviews .. 357
The Philosophy of Aesthetic Pleasure
*By M. H.*
Nītimālā
*By M. Hiriyanna*

8. Groundnut
*By B. V. Narayanaswamy Naidu and P. Hariharan* 1–144

# JOURNAL

OF THE

# ANNAMALAI UNIVERSITY

VOL. X MARCH, 1941 NO. 3

## Some Problems of Higher Education in India

By

A. C. Subrahmanyan,
*(Annamalai University.)*

In the present century, higher education has been taking giant strides. There were only five universities in India in 1915; between 1916 and 1920 seven more were added; and the two decades since have seen the birth of another seven; so that the total number of universities in India now stands at 19.* Similarly, the total number of students in Universities and colleges in British India in 1920 was 61,225 while the total number for 1937 is 128,623. This growth in the number of Universities and in the number of University scholars shows clearly a greater appreciation in the country of the value of higher education. And Universities too, in their turn, have increased very much the scope of their activities. In the 19th century they were content to be merely examining bodies granting degrees to persons who had acquired sufficient proficiency in different branches of learning; and these persons mostly entered the services of government which were then open to them. The idea of teaching, residential and unitary universities came to public attention in the days of Lord Curzon; and the passing of the Indian Universities Act of 1904, the resolution of the Government of India on Indian Educational Policy in 1913 and the Report of the Calcutta University Commission in 1919 became landmarks in the progress of higher

* The University of Rangoon is included in this computation.

education in the country. Universities have recognised the need for organizing departments of study and turning themselves more and more into centres of culture which provide facilities for advanced instruction and research, with libraries, laboratories and other accessories for the spread and advance of learning. Universities today are stressing the need for training the young men who are committed to their care and for moulding their character. They endeavour to give personal attention, atleast, to the advanced students. But still a large part of their energies is taken off for the imparting of mass instruction to undergraduate students. More attention has to be paid to post-graduate work and greater encouragement given to higher research if India is to keep pace with the advanced countries of the world. A glance at the following table will make the position clear:—

About 8·4% of the students in Universities are Post-graduates and ·1% are engaged in research. It must also be remembered that most of the post-graduate students are to be found in the professional colleges. It is true most of the Universities have instituted advanced research degrees; but the number of candidates who take these high degrees is very limited. The figures in the above table show that in one year approximately six candidates qualified themselves for M. Litt., eleven for Ph.D., two for D.Litt., four for D.Phil., seventeen for M.Sc., and twenty for D.Sc., bringing the total only to 56. Some Universities —notably Calcutta and Madras—have large numbers of post-graduate departments and adequate facilities for research and publication; there are also others where there are no fulltime University Professors and no research degrees. No doubt some Universities have definitely kept before themselves the needs of the community. The Bombay University, for instance, has a department of chemical technology one of whose definite aims is to form a link between science and industry. So too its department of Sociology is designed to meet definite needs. The Travancore University—the youngest University in the land—has as its definite aim research in applied science—especially in Biochemistry, Marine Biology and Fisheries—designed to promote the industries of the Travancore State. This University has a department specially devoted to publications in Malayalam and Tamil. Special attention is paid in the Osmania University to the publication of Urdu books and the Mysore and Annamalai Universities have led the way in the promotion of Kannada and Tamil studies respectively. Even apart from the Universities, research work of the greatest importance is being conducted in the Indian Institute of Science at Bangalore, the Bhandarkar Oriental Research Institute at Poona and the Bose Research Institute at Calcutta. Though much has been done yet still more remains

| S. No. | Name of University. | No. of students. | Post-graduates | No. of students engaged in research | Research Degrees Arts | Degrees Science | Publications. |
|---|---|---|---|---|---|---|---|
| 1. | Agra .. | 4246 | 1608 | | | | |
| 2. | Aligarh .. | 1674 | 562 | | 2 (Ph.D.) | | University Journal |
| 3. | Andhra .. | 4487 | 136 | | | | |
| 4. | Allahabad .. | 2217 | 653 | 16 | 4 (D.Phil.) | 6 (D.Sc.) | University Studies |
| 5. | Annamalai .. | 983 | 40 | 21 (1 Fellowship) | 2 (M. Litt.) | 4 (M.Sc.) | 16 books. Research Journal |
| 6. | Benares .. | 3385 | 460 | | | | University Journal |
| 7. | Bombay .. | 18193 | 904 | 12 | 1 (D. Litt.) | 1 (D.Sc.) | Publications University Journal |
| 8. | Calcutta .. | 35357 | 1611 | | 1 (Ph.D.) | 6 (D.Sc.) | Publications 400 |
| 9. | Dacca .. | 1691 | 528 | 2( | 1 (Ph.D.) | 2 (D.Sc.) | Dacca University Studies |
| 10. | Delhi .. | 2609 | 116 | 1 (Fellow in Economics) | | | |
| 11. | Lucknow .. | 2429 | 377 | 12 (Fellowships) | | | No publications |
| 12. | Madras .. | 12076 | 1164 | 40 | 1 (D. Litt.) 4 (M. Litt.) | 5 (D.Sc.) 13 (M.Sc.) | 135 books |
| 13. | Mysore .. | 3418 | 59 | | | | University Journal 14 books |
| 14. | Nagpur .. | 3801 | 757 | | | | University Journal |
| 15. | Osmania .. | 1461 | 175 | | | | 400 books Research Journal |
| 16. | Panjab .. | 17447 | 793 | 8 | 7 (Ph.D.) | | |
| 17. | Patna .. | 5926 | 438 | | | | 37 Lectures |
| 18. | Rangoon .. | 1950 | 56 | | No research degree offered | | 13 Lectures |
| 19. | Travancore .. | 2984 | 230 | 8 | | | |
| | Total | 126092 | 10667 | 138 | 17 | 30 13 | |

This table has been compiled from figures from Handbook of Indian Universities; Inter University Board 1940; also from Eleventh Quinquennial Review.

to be done. And in setting about this a study of the methods and organization of graduate studies in the United States will be instructive.

In the middle of the last century a similar problem confronted the educationists of the United States of America. In 1869 the National Teachers' Association of the States recommended the establishment of institutions to provide advanced education mainly or exclusively on the graduate level and to enlarge the boundaries of human knowledge by means of researches and investigations. Prominent educational leaders felt that there should be established in America, Universities like those on the continent of Europe, Universities exclusively devoted to post-graduate teaching and research. These institutions should bring together the greatest scholars and scientists and the students who are best fitted to be trained in methods of research. They should aim at two things, increasing the sum-total of human knowledge and training workers capable of it. "Wherever such teachers and such pupils are pursuing the most generous culture of a civilized age, there are the essential constituents of a University." Philip Tappan, President of the Michigan University, declared that there was great difference between mere professional and technical education and that 'large and generous culture which brings out the whole man and commits him to the active life with the capacity of estimating from the highest point of view all the knowledges and agencies which enter into the well-being and progress of society." According to him the most practical education was that which fitted men best for practice; and not that which led men most directly to practice. Professor Burgess of the Columbia University was also of the same view. The progressive understanding of truth must depend on free and untrammelled individual research and complete freedom of imparting its results. Even then there were facilities for post-graduate work at Harvad, Yale, Michigan and Columbia but higher education took a new and progressive turn in America when the Johns Hopkins University, Baltimore, Maryland was established in 1876, the Clark University, Worcester, Massachusetts, in 1888 and the University of Chicago in 1890.

The first of these was the result of a large benefaction by a Quaker merchant of Baltimore, named Johns Hopkins. The authorities of the University wanted to establish a new institution on a new plan, an institution capable of meeting the educational requirements of the land without entering into any competition with other foundations. They wanted to give a strong impetus to learning and culture—first in Baltimore, then in Maryland and other Southern States, and, finally, throughout the entire land. Their aim was to promote public welfare so far as it may depend on university influences.

At the inauguration of the University in 1876 President Eliot of Harvard observed that 'Universities, wisely directed, store up the intellectual capital of the race, and become fountains of spiritual and moral power.' Referring to the new venture he said "Here may young feet, shunning the sordid paths of low desire and worldly ambition, walk humbly in the steps of the illustrious dead—the poets, artists, philosophers, and statesmen of the past; here may fresh minds explore new fields and increase the sum of knowledge; here, from time to time, may great men be trained up to be leaders of the people; here may the irradiating light of genius sometimes flash out to rejoice mankind; above all here may many generations of manly youth learn righteousness." Professor Thomas Huxley, the great scientist who opened the University urged the authorities to provide wide opportunities for study and research in history, physical sciences and creative arts. One of the prime functions of a University was 'to increase the stock of knowledge by the investigation of truth.' Only ideas matter in the world: "The future of this world lies in the hands of those men who will supply the world with ideas and in some way furnish the mass of mankind who have not the time or inclination or the capacity to think out things for themselves with some theory of things that is not too absolutely inconsistent or too absolutely absured to serve some practical purpose." According to Huxley the highest duty of a University is to find a system that would discuss and protect the powers of artistic creation and the investigation of new truths which formed the two great aspects of the creative and investigative human mind. It should aim to supply the democratic state with individual citizens possessing 'intellectual clearness" and 'moral worth'. From the beginning the President of the University, Professor Gilman, wanted the institution to supply to the nation intellectual training of a higher order than could be obtained then at any other American College or University. It woud be a tragedy if a University produces learned pedants, or simple artisans or cunning or pretentious practitioners. "Its purpose is not so much to impart knowledge to the pupils, as to whet the appetite, exhibit methods, develop powers, strengthen judgment, and invigorate the intellectual and moral forces." It should aim at imparting a knowledge of principles and not merely of methods and at training a class of students who would be thoughtful, enlightened and progressive guides to society in whatever department of work or thought they may be engaged. President Gilman felt that as a result of the activities of the University, society must be definitely benefited; it should be impressed by the value of learning; its intellectual and moral growth should be stimulated; it should understand the world better. There should be less ignorance in schools, less bigotry in the temples,

less suffering in the hospitals, less starvation in the homes, less folly in politics. There should be more study of nature, more love of art, more health, more wisdom, more happiness in the country.

From the beginning the founder and trustees gave President Gilman a free hand. Dr. Gilman, was a scholar of ripe experience and the first thing he did after his appointment was to visit Europe once again in the interests of the new University. Prohibited by the terms of its grant from plunging immediately into an elaborate building programme the new University gave special attention to securing teaching staff and students. They wanted the ablest minds. Buildings could wait; even schemes of examination, instruction and graduation. In the selection of staff the trustees considered specially 'the devotion of the candidate to some particular line of study and the certainty of his eminence in that speciality'. He must pursue independent and original investigation and inspire the young with enthusiasm for study and research. They wanted the best men, men free from the tendency to sectional controversies, men willing to co-operate in trying a new experiment. When selected the head of a department was allowed considerable freedom in its development. Provided he worked in concord with his fellows he could select his own assistants, choose his own books and apparatus and devise his own plans of study. The work of the professors was supplemented by lectures by distinguished visitors from other institutions.

In regard to students they cared less for numbers than for merit. When the University opened it enrolled forty young men as associate fellows and resident graduates. A good many of them were advanced students who had taken high degrees in Europe and America. President Gilman was of opinion that invariably the best scholars are those who specialise after a broad and liberal education and the best teachers, those who combine teaching and research. Many Americans distinguished in life have been connected with Johns Hopkins. "The first requisite to success in any institution is a body of professors each of whom gives freely the best of which he is capable. A University can best promote learning by allowing its teachers a liberal margin for private study. While a good deal of freedom was allowed in teaching the President evinced a keen interest in the work of individual members. Professor Stanley Hall observes thus of Gilman: "He loved to know something of their every new investigation however remote from his own speciality, and every scientific or scholarly success felt the stimulus of his sympathy. His unerring judgment of men was triumphantly justified in the achievements of those he appointed. He was a spiritual father of many of his faculty, the author of their careers, and for years made the institution the paradise and seminarium of young specialists. This made

stagnation impossible, and the growth of professors there in their work was, I believe, without precedent."

Dr. Gilman held that all sciences were worthy of promotion; that there was no conflict between religion and science; that in the promotion of science remote utility was quite as worthy to be thought of as immediate advantage. However, a University as also its scholars, must select particular subjects for special pursuit. In the methods of work, in study and teaching the utmost freedom must be allowed to student and teacher.

According to a graduate student of the University the most remarkable thing about Johns Hopkins was the freedom of access to teachers and the stimulus afforded by contact with mature minds. Other noteworthy features of the institution are the visiting lecturer plan, the seminar system and the special attention paid to the publication of scientific and scholarly journals. By the visiting lecturer plan some distinguished professor of another University was invited to deliver a course of lectures, often times for a period sufficient to make the lecturer in a real sense a part of the University. This served more than one purpose; it familiarized the members with the work done in other foundations; it gave publicity to the work done in the institution and enabled it to get direction and advice whenever necessary. Most often it was a course of twenty lectures, delivered every evening at 5 o'clock attended by about 150 listeners, open to all who wished to hear, whether students or not. The lecturers were accessible to all who wished to consult them. The introduction into the academic circle of 'men from other Universities, observing, critical, suggestive, familiar with different ways, looking perhaps, for colleagues or for assistants, asking help, answering questions, showing methods, provided richness and colour and solid intellectual quality. The presence for brief periods of a large number of associates, readers or assistants who secured higher appointment there or elsewhere strengthened the University and made its work known wherever scholarship was esteemed. The seminar or study circle is a group of teachers and students who meet regularly for the study of a particular subject. The meetings are arranged near the library to which all have access at other hours. A lecture is delivered, questions are asked, comments are made, a demonstration is given, a paper is read and thus the study is promoted in an informal but effective manner. The University, in addition, published six scholarly and scientific journals including *Modern Language Notes*. Thus it aimed to spread abroad the results of the researches of its teachers and students and make them of practical use to the nation.

The Clark University, at Worcester, Massachusetts was started in 1888 by the munificience of a businessman named Jonas Gilman Clark. It is a graduate institution which aimed at selecting rigorously the best students, seeking to train leaders only, educating professors and advancing science by new discoveries. Stanley Hall, the president, wanted the institution to be of the highest and most advanced grade with special prominence given to original research. He desired to secure the most talented and best trained young men. He declared, "We are not a graduate department in which most so-called graduate students attend and most professors conduct undergraduate work. We are a school for professors where leisure, method and incentive, train select men to higher and more productive efficiency than before." Hall had been professor of experimental psychology at Johns Hopkins before he was appointed at Worcester and there is a certain similarity in methods, organization and aim between Clark and Johns Hopkins.

Like Gilman, Hall too toured the Continent before he entered on his new duties. He chose an extraordinarily gifted group of teachers and designed his institution mostly for candidates for the Doctor's degree. From the very beginning the University was widely acclaimed and accomplished work of a high order. It left an indelible impress on the educational effort of the country; it influenced every institution from University to kindergarten and quickened the pulse of educational thought. The success of the experiment demonstrated the wisdom of running an institution devoted exclusively to graduate work with a limited number of selected students. It gave the country a new type of institution having no under-graduate students, with no problems of classes, dormitories or discipline; moreover it enabled Americans to receive the highest form of training and culture without going to Europe. By 1901 Clark men had won positions for themselves in the faculties or teaching staff of Harvard, Yale, Johns Hopkins, Columbia, Chicago, California, Toronto and in scores of other institutions.

At Clark as at Hopkins we see the determination to meet urgent contemporary needs by the application of science to useful arts. No tradition was to be respected which did not promote this end. Here too there was insistence on quality in teacher and student, on funds to carry on the work, on time and leisure for research and freedom to work in one's own way. The inscription at the entrance to the work-room of the school of geography in the University is typhical: "The very best kind of education is obtained in doing things one's self under competent direction and with good guidance." The teachers were friendly guides to their students and every student was made to feel that he stood for something. President Hall wanted to do everything possible for

instructors to do for the students who were received within the portals of the University. They should be guided to the best books and to the best methods of work known to the instructor. In fact he should share with his students all his hopes and plans for research. The very attitude of research is a great education to the advanced student; it stimulates effort, quickens initiative, strengthens the will and creates independent judgment and action which are the culmination of culture. Nothing can be more inspiring than the instruction given to a select few by an investigator who stands at the elbow of discovery, feeling the heat and light which attend it.

Hall complained that Americans had not yet understood the true spirit of teaching. "When we have a thoughtful investigating man who has come to be two and twenty, has the fulness of his power, and is eager to keep up his studies, we turn him out of our college, and say, 'we have nothing more for you.' And when we have a man who is determined to devote his life for others, we thank him and say 'we will make you a professor in a college; we will give you fifteen hundred dollars a year, while with your ability you would earn fifteen thousand somewhere else.' And then we set him to teaching boys of eighteen the difference between the subjunctive and the optative, or showing them the mistakes they have made in their German exercises where they have put in a masculine article instead of a feminine." It is true that the well-furnished bachelor of arts feels helpless when he is turned to creative research after long familiarity with passive receptiveness, he needs personal direction and management. "But when the new powers are once acquired they are veritable regeneration. He scorns the mere luxury of knowing, and wishes to achieve, to become an authority and not an echo. His ambition is to know how it looks near and beyond the frontier of knowledge, and to wrest if possible a new inch of territory from the realm of chaos and old night, and this becomes a new and consuming passion which makes him feel a certain kinship with the creative minds of all ages, and having contributed ever so little, he realizes for the first time what true intellectual freedom is, and attains intellectual manhood and maturity. This thrill of discovery, once felt, is the royal accolade of science, which says to the novice, 'stand erect, look about you, that henceforth you may light your own way with independent knowledge' ".

Scholars at Worcester have also felt the magic spell of Hall's inspiring personality and have regarded his seminars as the most striking feature of the Clark University. At Worcester the human side of University enterprise was uppermost and routine and red tape were at a minimum.

The University of Chicago which came into existence in 1890 as a result of the munificience of the merchant prince John D. Rockfeller has also made a distinct contribution to higher education in America. According to Harper, its first President, the main energies of the institution have been directed towards graduate work. According to Dr. Strong, one of its inspirers, a true University is an institution for advanced and professional studies. Its central feature is a comprehensive fellowship system; Oxford has 311 fellowships and 346 scholarships while Cambridge has 335 fellowships and 795 scholarships. President Harper, envisaged three divisions of University work:—1. Teaching and research 2. Extension work. 3. Publications.

Harper also aimed, as Gilman and Hall had done, at freeing students and faculty from the handicaps of traditional college and enable them to live and work in an atmosphere of scholarship and research. He too realised the importance of the human element and the necessity for adequate leisure for the teachers. Dr. Harper and the trustees of Chicago wanted to bring together the largest possible number of men who were already distinguished by their research, representing different types of training and different sets of ideas, thus providing richness and diversity to the ultimate constitution of the University. A noteworthy feature of Chicago was the presence of women in the faculty and the class room. Like Hall, Harper too fully understood the necessity for meeting the needs of the time and the importance of utilizing science for economic and social development. 'It is not enough that instructors in a University should merely do the class and lecture work assigned to them....The University, including every member of the University, owes to the world at large a duty which cannot be discharged in the ordinary class room exercise. The true University is the centre of thought on every problem connected with human life and work, and the first obligation resting on individual members which compose it is that of research and investigation.' Its true function is the resolving of the problems of civilization; and this requires men of the greatest genius and culture. Dr. Harper stood for absolute freedom from interference by church or state, though such freedom may be abused. He maintained that the ultimate worth of scholarship lay not in its prestige with scholars but in its value to human life. The University of Chicago paid more attention to publication and extension work than any other American foundation. It is remarkable that of the four Americans who won Nobel prizes in Science in the first 25 years of Nobel awards three were members of the faculty of Chicago. And no wonder the University was a great success from its very inception.

In spite of its large enrolment the authorities of the University declared as late as 1925 that the value of a University is to be mea-

sured not by numbers but by the quality of its work and its contributions to knowledge and educational training and practice. "The aim of the Graduate School (at Chicago) is two fold—first, research for the sake of the discoveries that will thus be made, and second, the education of students in methods of research, and teachers who will train others to follow in their footsteps.

It is the spirit of research, the eager and organized effort to enlarge the area of human knowledge, to replace guesses by certainties, to open new areas of knowledge, that is the most characteristic work of the modern University. We shall still try to know what men of the past thought, because we appreciate that all increase of knowledge comes by an evolutionary process advancing stage by stage, but our emphasis will always be on the facts accurately observed, and our ultimate appeal will always be to them."

American higher education has not greater achievements to its credit than Johns Hopkins, Clark and Chicago. And in essence the methods and organization of these three seats of learning followed similar lines. First came the insistence on the importance of original research, next, the recognition of the value of the personal element; and thirdly the efforts to make education meet the needs of the time. The special methods pursued were the visiting lecturer plan, the seminar system and the establishment of scholarly journals and the publication of valuable books.

If the Universities of India are to be able to give a training to young men which would fit them to occupy the highest positions in the realms of thought and action they must take a planned and concerted step forward along these lines. And the scope for research and the need for training are almost unlimited in India. Young men and women have still to go to foreign countries for receiving the highest training in the study and investigation of their subjects. The highest positions in Universities and public services have not yet been manned in any considerable numbers by those who have received all their education in India. And the problems that confront our country are many and baffling. It has been suggested that it is the task of the Universities to evolve a formula which will reconcile the claims of rival interests in a future constitution for the Government of India. It has been recognised on all hands that in the harnessing of science to industry, in the development of the material resources of the country, in improving the standard of life of the people, in discovering the cause and cure of diseases most prevalent in the land we have as yet touched only the fringe of the problem. Again there are the problems connected with a new interpretation of our history and culture.

It is sometimes contended that the study of English and foreign languages in India is valuable only for the information they convey. Even if this were so, these language enshrine the most advanced knowledge that humanity possesses in modern times. Apart from this the study of foreign literature should be a guide to the improvement and development of Indian languages. The importance of the study of foreign languages for Indian linguistics can scarcely be over-estimated. Whether creative work in English and foreign languages is possible or ought to be attempted by Indians is a much debated point. But there can be no question that Indians can attempt critical studies of foreign works and make thus a substantial contribution to their critical literature; and what is more the study of Indian literature in the light of foreign modes of critical approach will be of undoubted benefit to the appreciation and improvement of the languages of the land. A proper study of foreign languages would undoubtedly lead to a quickening of creative activity in the languages of our country. It seems desirable therefore that professors of English and foreign languages in Indian Universities should as far as possible be persons who have a fair knowledge of Indian literature in addition to acquirements in the foreign language and that professors of Indian languages should have proficiency in foreign languages. Consequently the scope for research and a new orientation of studies is as great in the study of languages as in other departments of learning.

# The Nayaks of Tanjore

BY

V. VRIDHAGIRISAN, M.A., M.LITT.

EDITED WITH INTRODUCTION AND NOTES

BY

C. S. SRINIVASACHARI, M.A.

to the Danish proposal made to Malaya (Malliah Chetti) to occupy the port, paying the stipulated rent of 3,000 parados per annum to the Naik of Tanjore. It was also made clear that the Danes might claim the place within three years 'on reimbursing Malaya, all his outlay.' The Hague Transcripts refer to the proposals made to the Dutch and Mallaya Chetty and add that these fell through. owing to the opposition of the Nayak of Tanjore. From William Bayley's account of the voyage in A.D. 1637, it is clear, that the Danes were still in occupation of Tranquebar. However, the sad plight to which the Danes were subjected to, by the absence of regular supplies of ships and money from home, did not seem to have improved the situation and the Danish authorities of Tranquebar were still entertaining the idea of either selling away the settlement or of leasing it out. In the beginning of 1640, the English Council at Surat suggested that Tranquebar should be acquired from the Danes 'if their poverty should induce them to part with it.' Another letter dated January 28, 1644 from Fort St. George refers to the miserable condition of the Danes at Tranquebar. The Dutch were, however, negotiating with the Danes for the purchase of Tranquebar, as they were anxious to prevent it from falling into the hands either of the English or the Portuguese. The Danes also seemed to have promised the Dutch to give them their first offer.[29] That Paul Hauseene, the Danish Chief at Tranquebar, had offered to deliver the fort to the Dutch on condition that the latter should pay the debts incurred by the Danes on the Tanjore coast and should restore it to the king of Denmark on demand is contained in a letter dated October 19, 1653. In 1654, a Danish ship containing cargo was captured 'by the Brahmans.' Since nothing more is known of Tranquebar, it is certain that it continued for sometime more under the Danes themselves. In 1669 after a lapse of twenty years a ship is said to have arrived at Tranquebar from Denmark.[30]

The English after their first attempt to found a settlement at Karikal in A.D. 1624, and which ended in a failure, seem to have given up altogether the idea of making further attempts to establish a factory in the dominions of the Nayak of Tanjore. However, their trade with the Danes at Tranquebar is recorded in their records, where it is mentioned that in 1643, ships loaded with arecanuts and calicoes had arrived from Tranquebar, about the middle of the same year. In that year the English

29. Foster: *The English Factories,* 1651-53. Introduction, p. 28.

30. Foster: *The English Factories,* 1668-69. Chokkanatha Nayaka's negotiation with Francois Martin in 1675, offering him both Negapatam and Tranquebar in return for his help in driving away the Dutch and the Danes from the kingdom of Tanjore, shows that Tranquebar was still under the Danes. Tijdschrift, p. 11. Cited above.

are said to have sent Mr. Greenhill to Tranquebar with 3,500 rials in money and coral to be invested in commodities. The fact that the English made a further attempt to found a factory at Dēvikōttah (at the mouth of the Coleroon) in 1664 and that they were again refused permission by the Nayak of Tanjore, is mentioned in a Dutch letter.[31]

(c) *The Condition of the Kingdom under him.*

The long reign of Vijayarāghava from A.D. 1633 to A.D. 1673 was full of troubles and costly wars which impoverished the land and denuded it of men and wealth. The Nayaka comparatively speaking, may be said to have had a peaceful reign till A.D. 1642 and for the rest of his period, he had to struggle hard to maintain his position and dominion in tact. He was the last of the Tanjore Nayak line. His epigraphs do not take him beyond A.D. 1656,[32] and from the provenance of these it may be said that he succeeded in keeping intact the territories left by his father Raghunātha Nayaka ; but in the later years of his reign, his territories suffered a diminution on account of his wars with Madura. In the east, the ports of Negapatam and Tranquebar were held by the Portuguese, the Dutch and the Danes respectively, while on the south-west his epigraphs and the chronicles support his authority over a part of the modern Ramnad District.[33] An inscription coming from Nedungunram[34] in the North Arcot District shows that the place had continued to be under the Tanjore Nayaks and also under Vijayarāghava Nayaka in A.D. 1643.

Like his predecessors, Vijayarāghava also had numerous agents, who assisted him in the administration of his kingdom. A record coming from Ōlayāmputtur[35] and dated in the cyclic year Sarvadhāri corresponding to A.D. 1648, mentions one of such agents, who was called Vaidyanātha Aṇṇagal and who is said to have effected a *parivartana* (exchange of property) with the people of that locality. Another agent is mentioned in an inscription coming from Mudigondanallūr.[36] Nainiappa Nayanar, the agent referred to, made provisions for the maintenance of daily worship and festivals in the temple of Mudigondanallūr in lieu of the old right of the temple in collecting donation from

31. Foster : *The English Factories*, 1661-1664, p. 365.
32. 10 of Appendix A of 1921-22.
33. There is an inscription of his to be found at Tirukkōshtiyur in the modern Sivaganga Zamindari.
34. 709 of 1904.
35. 543 of 1918.
36. 166 of 1925.

the villagers for that purpose. A third agent is mentioned at Nedungunram, but his name is not known. Vijayarāghava Nayaka was tolerant of all religious faiths, but he specially favoured Vaishnavism by his liberal patronage. His inscriptions as well as the literature of the period show that he was a staunch Vaishnava devotee and this extreme devotion was due to the presence of Kumāra Tatācharya, the great Vaishnava scholar, at Tanjore. Vijayarāghava made him the royal preceptor.[37] And speaking of the Nayak's regard and veneration towards his spiritual master, a Jesuit letter dated 1659 says 'that every December the then Nayak (Vijayarāghava) of Tanjore used to cause his *guru* to be carried several times round and round the town in a gorgeous palanquin borne by the ladies of the palace and preceded by another palanquin containing the guru's slippers and used to walk himself in front of the procession swinging a censer and making repeated obeisances to his spiritual master'.[38] The *Tanjāvūri Añdhra Rājula Charitamu* says that he used to feed daily about twelve thousand Brahmans and it is said that he himself partook of his food only after seeing that this feeding was actually over. It is also claimed in the chronicles that Vijayarāghava paid daily visits to Srirangam to offer worship to Lord Ranganatha and that, when hostilities between Tanjore and Madura became intense he stopped going to Srirangam but, instead, erected a big tower in his own capital so that by climbing to its top, he could have a view of the towers of Srirangam. He is also said to have made large benefactions to the tutelary God, Rājagōpālaswami at Mannārgudi. The *Raghunāthābhyudayam*[39] says that he presented the God, Rājagōpāla, with an armour studded with precious stones. He also built the *prākāras* of the same temple and added flower gardens and tanks to it. He founded an agrahara and named it after his father Raghunātha Nayaka. The present Rājagōpālaswāmi temple at Tanjore was also built by him. Mr. K. Sitaramayya says that even though he was a staunch Vaishnava, yet he was tolerant of other religions and built several mantapas to Siva temples in the land.

According to the evidence contained in the *Mannārudāsavilāsam*[40] of Rangājamma, Vijayarāghava married Kāntimati, the daughter of one

37. The *Mannārudāsa Vilāsam* of Rangājamma. The work bears evidence to the close association of the Nayak with his master, Tātācharya.

38. *The Madura Manual*, p. 160.

39. *Sources of Vijayanagar History*, p. 255. The same work gives an account of the decorated halls and royal mansions within the palace, p. 265.

40. Since the works refer to Vijayarāghava's marriage in Subhakrit, corresponding to A.D. 1662, the work must have been written about that time.

3

Rājachaṇdra, who is said to have given away as dowry, ten lakhs of villages to his daughter. This marriage with Kāntimati appears to have taken place at the instance of his master Tātācharya. That Vijayarāghava had more than one wife is supported by the evidence of the Jesuit letters and Maṇṇārudās in his *Hēmābja Nayika Swayamvaram* says that he was the son of Vijayarāghava by his another wife called Rājagōpāla Kaṇchika. The Nayaka was also a great patron of learning and man of letters. Numerous poets and poetesses lived and flourished in his court. Among his poets, Kāmarāzu Vēṇkatapati Sōmayāji, the author of *Vijayarāghava Chaṇdrika*, Kōnēti Dikshita, the author of *Vijayarāghava Kaḷyānam;* were the important poets of his court. The *Tanjavūr Añdhra Vāṇgmaya Charitam,* which forms the basis for a study of South Indian Telugu Literature, says that Cheṇgalvala Kālakavi, the author of *Rājagōpāla Vilāsam* and Purushōṭṭama Dikshita, the author of *Annadāna Nātakam;* were also his poets. Kshētragña, the great South Indian musician and composer is said to have adorned the court of Vijayarāghava and flourished in that period. Maṇṇārudās himself was an author and he wrote *Vijayarāghavābhyudayam* and *Hēmābja Nāyika Swayamvara Nātakam.* The name of Raṇgājamma figures prominently among his numerous poetesses.[41] She calls herself a wife of Vijayarāghava and prides herself as being able to compose a hundred verses at a time.[42] She was the daughter of Pasupulēti Vēṇkatādri and Mangamāmba and wrote the *Rāmāyana* and the *Bhāgavata sāram.* Vijayarāghava, in appreciation of her scholarship and versatile learning, is said to have honoured her by performing a *kanakābhishēkam* (bathing in gold) on her. The reference to a number of Telugu poets in the Tanjore literature of this period, shows clearly that Vijayarāghava patronised them more and more. Sanskrit also received its due share and Vēṇkatamakhi's *Chaturdaṇdiprakāsika* was written during his reign. Vijayarāghava himself was an accomplished poet in Telugu and the *Taṇjavūr Añdhra Vāṇgmayam* says that he wore an anklet called Sāhitya Rāya on his left leg and had a banner containing the image of Sri Sarada as indicative of his patronage of learning. He bore the *birudas* of Sāhitya Bhōja, Sangīta Vēdi and *Lakshavipra aṇṇadāta*.[43] All his works refer to his interest in theatricals and the palace itself contained a big theatre

41. The *Maṇṇārudāsa Vilāsam* mentions Champakavalli, Kastūri, Sasirēka, Mōhanamūrti, Krishnāji and others besides Raṇgājamma.
42. The *Maṇṇārudāsavilāsam*. Satalēkhini and Achyuta Vijayarāghava sārvabhauma Dharmapatniyāha Raṇgājamma.
43. The *Maṇṇārudāsavilāsam*. Published by the Andhra Sahitya Parishad, Coconada.

(*raṅga*), where numerous plays were enacted to the satisfaction of the Nayaka. Speaking of his reign, Jayanti Ramayya Pantulu[44] says that 'the Telugu Prabhanda Literature inaugurated by Allasani Peḍḍaṇṇa, reached its glory under the careful nourishment and patronage of Vijayarāghava.' And the important contribution made to the southern school of Telugu literature during his reign, was the impetus given to the dramatic form of literature.

The internal evidence shows that his reign was noted for its literary activity and it is well known that he was loved and respected by his subjects for his pious and charitable works. In spite of all these finer shades of his character which represent him as a patron of the fine arts and a lover of music, the foreign evidence contained in the Jesuit letters shows that his later years were full of troubles and wars and also paints a black picture of him, charging him with neglect of duty, want of courage and oppression of his subjects. His lack of leadership and short-sighted policy are all portrayed in them. The frequent departure of a number of his subjects from the realm and their migration to Madura and Mysore are ascribed to his neglect of duty in protecting his subjects from danger and to the oppression to which his people were subjected to by the cruel exactions of the Pradhāni. On account of this, 'the artisans suspended their work; the merchants closed their shops; most of the people left their homes and the kingdom showed the appearance of a desert.' From the letter of Andre Freire, it is known that Vijayarāghava soon remedied the sufferings of his people 'by giving him (Pradhāni) up to the people's anger about A.D. 1666.[45] Even though his exactions can be justified by his purchasing peace with the Muhammadans at a heavy price, yet his weak character and lack of courage cannot be adequately explained and the extremely religious policy of Vijayarāghava only hastened the downfall of the Tanjore Nayaks.

44. The Southern School of Telugu Literature. *Journal of the Andhra Historical Research Society*, Vol. II, Parts 3 and 4.
45. *La Mission III*: pp. 201-2.

## Chapter IX

# CHENGAMALDĀS (A.D. 1674 to 1675)

Soon after the fall of Tanjore and the death of Vijayarāghava and his son Maṇṇārudās in the tragic battle of A.D. 1673, Chokkanatha Nayaka of Madura appointed Aḻagiri Nayaka his foster-brother, to the governorship of Tanjore. Aḻagiri assumed charge of Tanjore in A.D. 1673 and soon restored peace and order and reorganised the administration of the kingdom on a strong basis. As viceroy, he had to remit the surplus revenues to the Madura Nayaka, and he seems to have done so only in the first year of his rule. But in the succeeding year his ambition increasing with his power, he neglected to remit this sum in time to the court of Madura and even assumed a tone of equality in his correspondence with Chokkanatha Nayaka.[1] The chronicles mention that he took among his officers one Veṇkaṇṇa, a Niyogi Brahman, who had served the late Vijayarāghava Nayaka as his Rāyasam (secretary). And it is said that it was his mischief that was responsible for Aḻagiri Nayaka's independent and indifferent attitude towards his suzerain. However, Chokkanatha did not think of punishing Aḻagiri for his impudence, on account of his close relationship and liking for the man and so Aḻagiri was left alone. In the interval news was received that the old Nayak family was not totally extinct and that a boy of the late Nayak's family, who was saved from the catastrophe that befell Vijayarāghava and his family, was being brought up by a merchant at Negapatam.[2] And Veṇkaṇṇa, who was probably 'discontented with

1. The Jesuit letters do not refer to these incidents but say that Alagiri was ruling over Tanjore under Chokkanatha. Taylor's Mss. and the *Tanjāvūrī Añdhra Rājula Charitamu* speak of his independence. Also see *The Nayaks of Madura*, pp. 164-170.

2. The *Tanjāvūri Añdhra Rājula Charitamu* says that Chengamaladās, at the time of his rescue, was a boy four years old and he is called as the younger son of Vijayarāghava. It adds that he was brought up by a wealthy merchant. *Sources*, p. 325. Another chronicle (Taylor's Mss. 11, p. 200) says that he was a petty merchant and that Chengamaladās was a child aged only two years, at the time of his rescue and that he was the son of Maṇṇārudas (child of Maṇṇārappa). Mr. Sathianatha Aiyar says that Chengamaladās must be a son of Maṇṇārudās and not of Vijayarāghava, as the latter is described as an old man aged eighty at the time of his death. *The Nayaks of Madura*, p. 167, Note 38. Mr. K. Sitaramayya, (p. 338 to 340) is also of the same opinion. He says that Chengamaladās was a grandson of Vijayarāghava and adds that he must be at

his position and influence in the new regime,' thought of taking advantage of the presence of a member of the old family and also the feud between Alagiri and Chokkanatha, by working out a scheme, in order to restore the old dynasty and to bring about the downfall of Alagiri. Organising the necessary measures to 'facilitate his *coup-d-etat,* he hastened to Negapatam.[3]

Joining Chengamaladās (also known as Chengamala Nāyaka) Venkanna made his way to the court of Bijapur and sought the sultan's help for re-establishing Chengamaladās on the Tanjore throne.[4] Venkanna was successful and the Bijapur Sultan, who was led to believe that Chengamaladās was the legitimate heir to the Tanjore throne, sent an army under his general Ekōji, *alias* Vyankoji, to assist Chengamaladās in his attempt to recover back his crown and patrimony and also to drive away the usurper, Alagiri. Capturing the fort of Arni on his way, Ekōji marched on towards Tanjore.[5] Alagiri being informed of Ekōji's advance, appealed in vain to Chokkanatha for help; and the latter bearing in mind Alagiri's past conduct refused to send any help. In the meanwhile Ekōji had entered the kingdom of Tanjore and was advancing towards the capital. Collec-

least twenty to twenty-five years of age since both Mannārudās and Chengamaladās are mentioned in the *Ushāparinayam.*

3. *Taylor's Ms.* says that Venkanna stayed at Negapatam till the boy was ten or twelve years of age, i.e., for about eight years. But the reference to Alagiri's fall in A.D. 1675 in the Jesuit letters disproves the statement of the chronicles. The *Tanjāvūri Añdhra Rājula Charitamu* does not speak of his stay at Negapatam. Moreover as Mr. Sathianatha Aiyar says (p. 167) 'Venkanna was too much of a politician not to realise that a moment's delay, would be dangerous to the success of his plans.'

4. Nelson (*The Madura Manual,* p. 194) says that 'Chengamaladās escaped from the palace during the confusion which ensued upon its destruction and fled to the court of Idal Khan (Adil Shah), who received him kindly and promised to assist him.' But he does not mention the source of this information.

5. Andre Freire's letter dated 1676 refers to the expedition led by Ekōji, but it differs from the native chronicles in more than one respect. (*La Mission* III, pp. 247-249). The letter says that Idal Khan, informed of these events sent an army under Ekōji to re-establish the son of the defeated king on the Tanjore throne. According to it, Ekōji fought with the Madura troops sent under Alagiri and defeated them. The *Tanjāvūri Añdhra Rājula Charitamu* and the chronicles say that Ekōji arrived at Ayyampēt and fought with the troops of Alagiri. As it is known for certain, that Cokkanatha did not send any help to Alagiri; the statement of the chronicles seem to be more probable. See also *The Nayaks of Madura,* pp. 167-170. Moreover the chronicles refer to the crowning of Chengamaladās and then only speak of Ekōji's usurpation, but do not refer to the circumstances that led to it.

ting all the available forces, Alagiri met Ekōji near Ayyampēt and offered him battle. The defeat of the Tanjore army disheartened him and he is said to have fled to Mysore by way of Ariyalur to save his own life. And Ekōji entered Tanjore soon after and crowned Cheṇgamaladās as the rightful king of Tanjore. The native chronicles speak of the lavish and munificent gifts and presents made to Ekōji by Cheṇgamaladās; and it is said that Cheṇgamaladās was also shown the place where the treasures were buried and that he unearthed a sum amounting to twenty-six lakhs of pagodas. Ekōji was also given the revenues of the districts of Kumbakonam, Maṇṇārkōil (Mannargudi) and Pāpanāsām, to cover the expenses of his expedition. The chronicles again speak of Ekōji's stay at Kumbakonam for some time.[6]

Cheṇgamaladās was proclaimed ruler of Tanjore and he began to rule about A.D. 1674. According to the account of the chronicles, he was not allowed to rule peacefully even for a short time as there were internal dissensions among his followers. Cheṇgamaladās acting on the advice given by his foster-mother who had rescued him from the tragedy in 1673 and brought him up faithfully, is said to have appointed the Chetti merchant of Negapatam, who had protected him in his exile, as his Pradhāni and Dalavāy instead of giving it to Veṇkaṇṇa, who was eagerly expecting to be raised to those offices. And the latter dissatisfied with his master's arrangement and 'displeased at the loss of his coveted prize,' approached Ekōji and induced him to take possession of Tanjore for himself.[7] Emboldened by the co-opera-

6. *The Madura Manual*, p. 197. Mr. Nelson following closely the Jesuit evidence says that Ekōji instead of placing Cheṇgamaladās on the throne, had himself usurped it and became an independent ruler. But all the chronicles are agreed that Ekōji's usurpation happened only some time later and was not immediate. Wilson gives a different account. *The Historical Sketch of the Kingdom of Pāṇḍya*, pp. 55-56.

7. Mr. K. Sitaramayya says that Ekōji and Veṇkaṇṇa conspired together against Cheṇgamaladās and adds that the former's stay at Kumbakonam was perhaps due to his ambition to conquer and annex Tanjore. Mr. Sathianatha Aiyar following the chronicles (*The Nayaks of Madura*, p. 170) says that Ekōji though ambitious, at first refused to invade Tanjore as he feared his master, the Sultan of Bijapur but the receipt of the news of the death of the Sultan emboldened him to take action. Mr. Sitaramayya says that the statement in the chronicles that he feared his master is not trustworthy since, there is nothing to support the death of the sultan of Bijapur in 1675. Adil Shah II died in 1673 and was succeeded by Sikander Shah who ruled from 1673 to 1686. He adds that Ekōji himself must have been sent by Sikandar Shah and Ekōji stayed at Kumbakonam only to give effect to his ambitious policy of conquest. Hence the death of a sultan and the determination of Ekōji to march against Tanjore have no basis of authenticity and the latter must have acted of his own accord.

tion of Veṇkaṇṇa, Ekōji advanced upon Tanjore; and Cheṇgamaladās informed of the advance of Ekōji, the Maratha general, escaped to Ariyalur.[8] Tanjore now fell into the hands of Ekōji without any difficulty; Ekōji's occupation of Tanjore marks the beginning of the Maratha rule in the South. He restored peace and order and tried to make amends for the defect in his title by increasing the material welfare of his subjects. Fr. Andre Freire adds (in his letter dated 1676) that 'justice and wisdom of his government begin to heal the wounds of the preceding reign and develop the natural resources of this country . . . . .'.

The Maratha occupation of Tanjore must be deemed to have taken place in the beginning of A.D. 1675 as it is mentioned that Ekōji took Tanjore in the month of Māgha of Saka 1596 corresponding to February-March A.D. 1675.[9] Fr. Andre Freire's letter dated 1676 after men-

8. About this time Rāja Sūrya, the nephew of Tirumalai Sētupati of Ramnad, is said to have supported the cause of Cheṇgamaladās. What became of this coalition is not known. But Rāja Sūrya was imprisoned and put to death subsequently. *The Nayaks of Madura*, p. 184. H. H. Wilson's reference to a Sētupati called Sūrya Dēva, who is said to have taken part in the fight along with Vijayarāghava in 1673 perhaps has reference to this Rāja Sūrya. *The Historical Sketch of the Kingdom of Pandya*, 1838, p. 55.

9. *Inscriptions of the Marathas* by Mr. T. Sambamurthy Rao. Nelson says that Ekōji marched upon Tanjore in the early part of 1675 and established his authority. *The Madura Manual*, pp. 194-5.

*Additional Note by the Editor.—*

"A statement given in the Marathi language by an old servant of the Tanjore palace, sometime before 1787 and of which a translation is printed in Appendix VI of Fullarton's *A View of the English Interests in India* mentions it as the 17th February 1675." The account was given by a writer under the Dabir and Manoji in the time of Pratap Singh and was given in its literal translation from the Marathi. It runs thus:—"The Yacojee Rajah was the first man who took possession of the fort and country of Tanjore from a Gentoo (Telugu) king; this event happened on the 7th day of February 1675, dated in Gentoo, Rauchina Nama Sumvacharum, Magah Suddha Septimee. It appears, from the books which are kept in the palace, that there were 5753, which said villages were divided into the five following *subahs* or districts; *viz*:—

| | |
|---|---|
| Subah Trivady, | Subah Mannargoody, |
| Subah Combeconum, | Subah Pattacotah and |
| Subah Mayavaram, | Subah Valumputt. |

The country produced, in the year 1675, under the Yacojee Rajah, paddy cullums—32,050,000 (pp. 317-8 of *A View of the English Interests in India*, by W. Fullarton, London, 1781). Vyankoji Raja went from Tanjore to meet Shivaji in his camp to the north of the Coleroon in 1677 (September)=Shravan, Pingala, 1599 (Saka) according to the *Jedhe Chronology*, and after mutual greetings and

tioning the occupation of Tanjore by Ekōji, also supports this date. Thus Ekōji, who was sent out to assist Cheṅgamaladās and to re-establish him on the throne, had himself usurped the throne and thereby brought to an inglorious end the Nayak dynasty of Tanjore, the last Nayak himself taking refuge in the west. What became of him is not known; and the traditions, varied as they are, do not admit of any verification. It is claimed by some that Chokkanatha gave Cheṅgamaladās asylum and protected him.[10] Kavitvavēdi says that the descendants of the Tanjore Nayaks continued as jaghirdars under the Madura Nayaks and that a grand-daughter of Cheṅgamaladās was married to Vijayaraṅga Chokkanatha Nayaka of Madura.[11]

fraternising for eight days, Vyankoji got suspicious of the intentions of his brother and fled on a catamaran, across the river, without taking leave of his brother. Thereupon Sivaji seized his lands, 'Jagdeogad and the surrounding territory, and the whole province of Chidambar, and Vradhachal;" (See the *Sabhasad* of Krishnaji Anant. (cir. 1694) tr. of Mankhar).

A Tamil chronicler, Narayana Kone who wrote a detailed account of the history of the Carnatic with particular reference to the Gingee country and whose account was deemed to be fairly authentic and reliable, thus speaks of Vyankoji's usurpation at Tanjore:—"It is true that Shahji before his death had given to his younger son, Vyankoji (Venkoji), his jaghir of Bangalore. He had confided his son Venkoji to his Brahman minister, Raghunath Narayan Hanumante. For his part the latter considered Venkoji as his own son."

"Fired by ambition, Venkoji unjustly took possession eventually of the kingdom of Tanjore by force of arms. To pacify the country and make the population admit his authority, he had spent all the wealth amassed in the royal treasury (of Tanjore) by the previous king, Vijayarāghava Naicker. Far from suceeding, this subterfuge only seemed to alienate the neighbouring chiefs. He had to fight them incessantly and raise armies; which could not be done without enormous expenditure."

"Then famine having taken its part, it was not possible for him to levy heavier imposts on the inhabitants. Having deliberated he determined to confiscate the wealth of the temples which drew on him the hatred of Hanumante. He therefore took leave of his king under the pretext of making in his old age the pilgrimage to Benares. Really he went to see King Sivaji to inform him of the rapines and pillage (plunderings) of his brother." (Tamil Ms. *Karnātaka Rājākkal Savistāra Charitam* (in the Mackenzie collection)—Section VIII—and Guana Diagou's French rendering of the above—"Historie Distaillēē des Rois du Carnatic" par Narayanam Poulle—1939).

According to this chronicler, Vyankoji should have harried the whole country into poverty within a little over a year since Hanumante had left Tanjore even in the middle of 1676.

10. *The Tanjore Manual*, p. 753.

11. *The Añdhra Vāṅgmayam*, p. 214. Quoted also in Mr. Sitaramayya's work.

He further adds that Cheṉgamaladās had a son called Vijayarāghava and a grandson by name, Vijaya Maṉṉārappa. Still another view is that Cheṉgamaladās went over to Ceylon along with his daughter, who was given in marriage to a Kandyan King.[12] Mr. Nelson gives some information apart from these traditional stories; but they are also not supported by any other plausible evidence. He says that Kiḻavan Sētupati, enlisted the co-operation of Cheṉgamala Nāyakkan of Tanjore, who, it is said, was living then in perfect amity with the usurper Ekōji, against Madura.[13] However, an attempt was made by Kumāraiya, the Mysore general, to restore the old line of the Tanjore Nayaks, but it fell through for want of support and co-operation on the part of Chokkanatha of Madura.[14]

Cheṉgamaladās was the last known member of the Tanjore Nayak line and with his flight, the rule of the Nayaks came to an end. The Nayaks of Tanjore, who rose to power and prominence under the powerful protection and patronage of the Vijayanagar Empire did not long survive the decline of that Empire. Ever since the accession of Sriranga Raya III in 1642, the fortunes of the Empire as well as that of Tanjore entered on a definite phase of decline; and the subsequent troubles caused by the invasions of Bijapur and Golconda ruined the life of the Tanjore kingdom. Tanjore could not continue for long, single-handed and unaided against these great odds, and so exhausted, she fell. The frequent depradations of the Muhammadan force dried the land of its resources. Besides, the traditional loyalty of Tanjore to the Empire made her an irreconcilable enemy to the neighbouring Madura Nayaks, who were always in a hostile attitude towards her. To these was added the succession of weak and feeble rulers like Vijayarāghava and Chengamaladās. And Vijayarāghava was to a large extent responsible for allowing the kingdom to drift away by his extreme piety, neglect of duty, and want of statesmanship. All these causes acting in unison and favoured by the political circumstances of the times brought about the downfall of the Nayak rule in Tanjore.

12. *The Tanjore Manual*, p. 753. Mr. Sitaramayya thinks that this is probable on the ground that a member of the Kandyan Royal family told him the same story. *The Andhra Nayaka Charitam.*

13. *The Madura Manual*, p. 213. Mr. Sathianatha Aiyar in his work makes no mention of this. Pp. 184-185.

14. *The Nayaks of Madura*, p. 182.

CHAPTER X

## GENERAL FEATURES OF THE NAYAK RULE

The Tanjore Nayaks were technically and formally tributary vassals of the Vijayanagara Rayas and their vassalage is proved by their title Nayak which signifies a captain or governor. That Tanjore was a tributary fief of the Empire is testified to, clearly by the Jesuit evidence. The present custom of appointing a governor only for a term of years was not then in general vogue and when once an appointment was made, it was continued without any break or change so long as the appointee remained loyal and faithful to the suzerain power. Thus gradually the system of hereditary succession began to take root even with respect to provincial governorships. Hindu kingship was never elective in practice and the appointment of Śevappa Nayaka as the governor of Tanjore by the Emperor Achyutarāya began practically a hereditary line. The Nayaks thus appointed, carried on the administration of the government as the Raya's deputy. As tributary rulers, they were obliged to pay an annual tribute to their overlords and to maintain an army. Whenever their help was requisitioned by the emperors they had to render necessary assistance and help and play their part as became loyal feudatories. As subordinates, the Nayaks had only limited powers regarding their relations with outside powers and neighbouring rulers. Above all, their subordination meant their comparative security from foreign aggression since the suzerain power looked after their interests and it also meant less expenditure on defence.

Though the Nayak was technically only a vassal, yet in his own jurisdiction he was the supreme and practically the uncontrolled head of the government and he enjoyed almost sovereign powers. The people looked upon him as God's nominee and there was always exhibited an affectionate reverence for his position. His words were final and none dared to find fault with his actions except on rare occasions, as it was believed according to the Hindu conception of state ideals, that the ruler could do no wrong. Even though the Nayak's power was not checked by any council of ministers or popular assembly, yet it could not be deemed to have been an autocracy or an irresponsible power. He had the usual checks and restrictions in the form of *Dharmaśāstras*, conventions and the traditional moral code as enjoined in the Hindu text-books on *Rājanīti* and *Daṇḍanīti*. These were his guides and binding limitations in his work as administrator. Be-

sides, customary law, such as was embodied in the *āchāra* of the *sishtās* (conduct of the good) was much respected in the actual dispensation of justice; though it did not claim the same superiority as Dharma. As these laws were only to ensure a proper and good administration of the government and to put the king in the right path of Rājadharma, they were generally looked upon as inviolable checks upon the king's arbitrary power. The Nayak ruler, like other Hindu rulers, was a secular ruler as well as the protector of religion. The Nayaks in general, do not seem to have transcended the limits imposed by the traditional moral code and the good and welfare of the people were never sacrificed for any selfish interests or motives. And since the Hindu polity never comprehended a constitutional monarch of the modern type, the welfare of the people depended in practice largely on the individual character of the ruler and hence sometimes good government was followed by grave misrule. In case of tyranny and oppression the subjects had no legal means of getting their grievances redressed and the idea of rising up in open rebellion was never thought of by the people except on very rare occasions of intolerable oppression. Under such circumstances, the people resorted to migrations to places beyond his jurisdiction. According to the Jesuit evidence, such migrations took place in the reign of Vijayarāghava Nayaka on account of his heavy exactions to pay off the Muhammadan enemies. So also, in epochs of benevolent rule there were immigrations from other places into the country.

Practically the ruler's powers were limited by the prevailing moral codes; and the Nayak's rule was a benevolent despotism. Succession to the Nayakship was hereditary and the heir apparent called Yuvarāja, was given proper education and military training and was prepared in the art of government. The *Raghunāthābhyudayam* and the *Sāhitya-ratnākaram* refer to the early education of Raghunātha Nayaka in *Rājanīti* and in the art of handling the various weapons of warfare. Practical administrative training was also given to him by associating him in the working connected with the affairs of the administration. The ruling Nayaks gave abundant opportunity to their heirs, to get themselves fully acquainted with the functions of administration either by installing them on the throne openly or by associating them in rule. Such abdications to give full powers to the heirs and co-regencies, were resorted to when the ruler felt it was impossible for him to carry on the government, either on account of age or because of any crisis.

The Nayak was helped in the discharge of his duties by a number of officials, who formed a small council of advisers. Among them, the minister was the most important person. The office of 'Mantri' or 'Sachiva' was always held by men of great learning, integrity and inde-

pendence. According to the Hindu political idea the good of a state depended largely upon the king and his minister. And a king without a minister was compared to an elephant without its trunk. The Nayaks of Tanjore had a council of ministers and the chief minister was called the *Pradhāni*.[1] Under the Nayaks this office was always held by Brahmans. Gōvinda Dīkshita was minister to both Achyutappa Nayaka and his son Raghunātha and the epigraphs tell us that he was the Pradhāni as well as the agent (viceregent?) of the Nayaks. The *Sāhityaratnākara* says that when Raghunātha started from his capital on his famous expedition against his enemies, he entrusted Gōvinda Dīkshita with the entire charge of the state. The powers enjoyed by the Pradhāni and his influence, were second only to those of the king in importance. In his political status he was more even than the average Diwan and Prime-minister of the Indian States. The Nayak had great confidence in him and his advice was sought on all occasions. The Pradhāni was largely responsible for the shaping of the internal as well as the foreign policy of the state. Yagnanārāyana Dīkshita refers to the war council held by Achyutappa Nayaka and to the momentous part played by Gōvinda Dīkshita therein.

Next in importance to the Pradhāni was the *Dalavāy* or the commander-in-chief of the forces. He was also called the Sēnāpati; and he was responsible for preserving the internal peace and safety of the kingdom and also for defending it against external troubles and aggressions. The Dalavāy seems to have combined in him the office of Pradhāni and commander also under the Nayaks of Madura. But in Tanjore, the Dalavāy was only in charge of the army and its management. He also tended advice to the king on the problem of defence of the land as well as on war. The *Rayasam* or Chief Secretary, corresponding to the *Tirumandira Ōlai* of the Chōlas, was also an important officer under the Nayaks. He seems to have been the chief administrative officer, but did not enjoy the same importance and status as the Pradhāni or Dalavāy. He was the recorder and the executor of royal orders and was held responsible for the proper working of the civil departments of the state. Next in importance among the hierarchy of officials, was the officer called *Aṭṭavaṇai* or the chief

1. The Pradhāni is sometimes called the minister in charge of revenue. (*The Nayaks of Madura*, p. 237). Since the officer called *Attavana* is said to have been also in charge of this department, it is not possible to assign the portfolio of revenue to the Pradhāni of these times. See also, *Studies in the Third Dynasty of Vijayanagara*, p. 111.

accountant of the Revenue Department. He was the head of all the revenue officials who were called *Śampratīs* and *Kaṇakkans* (accountants). The Śamprati had under his jurisdiction a number of *Kaṇakkans*, the accountants of individual villages. The head of the *bhandāram* (treasury) was called the *Tōshikāna adhikāri* and he was also an important official connected with the king's council of ministers. The Nayaks did not seem to have paid regular salaries or fixed amounts of remuneration to these officials and their establishments; their services were secured to the state by gifts of land known as *mānya*.

Yagnanārāyana Dikshita also refers to the system of espionage working under a regular department, then prevalent in the court of the Nayaks. The spies had to make secret enquiries into the affairs of the people and study their disposition towards the state and other officials and also to report on the happenings in the neighbouring states. It is said that the news of the death of the emperor Venkatapati Raya I and the outbreak of the war of succession and the consequences thereof, were all quickly communicated to the Nayaka by these royal spies, who were men of great intelligence and skill. The reference in the Portuguese chronicles and in the English Factory Records to the Nayak's warm reception of foreign ambassadors, shows that foreigners were treated with much friendliness and cordiality by the Nayaks. Father Nicholas Pimenta,[2] a Jesuit observer, tells us how cordially he was received by the Nayak of Tanjore. He says:—'He (the Nayak) entertained us kindly and marvelled much that we chewed not the leaves of betel which were offered to us and dismissed us with gifts of precious clothes wrought with gold desiring a priest of us for his new city which (he) was building'. Captain John Bickley's account of the English voyage made from Bantam to Tanjore also contains references to the royal reception given by the king and his noblemen, to the English envoys at Tanjore.[3]

In the early part of their rule the Nayaks spent comparatively little on the defence of their kingdoms; but they always maintained an army. In course of time when the country was threatened by foreign invasions they had to devote more attention to defensive measures in order to ensure their own safety by erecting forts at places of strategic importance on the borders of the land. Thus the capital of Tanjore had first of all to be well fortified by the erection of a strong fortress with a deep moat full of water running round it. On the west of the

2. *Purchas: His Pilgrims*, Vol. X, p. 205
3. *The English Factories*, Vol. III (1624-29), pp. 13-14.

capital, Vallam was likewise fortified against the possible attacks of Madura rulers, and it was deemed to be a first line of defence for the capital. Under Vijayarāghava these fortifications were further strengthened and new fortresses were built at Paṇdanallūr in the north-east, Araṇtāṇgi on the south and at Pattukkōttai and Tiruppattur on the south-west in order to prevent the sudden and unexpected attacks upon Tanjore by the Muhammadans, who had extended their power in the lower Carnatic and the Nayaks of Madura who always threatened the Vallam line of defence. As the safety depended upon the defence of these forts, considerable care and trouble were taken to maintain them in good order. Each fort was placed under the command of a loyal and trusted captain and was equipped with up-to-date weapons of offence and defence. The Jesuit letters speak of the artillery that were installed in these forts. Huge quantities of provisions also were stored up in these forts for the garrisons in case of siege. The Dalavāy was the commander-in-chief and the commanders of these forts were his subordinates.

The Tanjore army was composed of infantry, cavalry and elephantry. Foreign mercenaries were also employed at times of need. The *Sāhityaratnākara* speaks of a camel corps forming a part of the Nayak's forces.[4] The foot-soldiers carried with them long spears, broad swords, bows and arrows and the reference to *agniyantrās* is evidence to the soldiers using firing guns. The use of muskets and cannon had become general in India in the sixteenth century, and had been familiarised by the Muhammadan powers of the Deccan and the European settlers of the coast. The soldiers wore armours and helmets. The cavalry and the elephantry were all well caparisoned and were manned by trained soldiers. Each elephant was equipped with a howdah of iron-plates on its back. As these two arms formed important elements of the Nayak's forces, much attention was paid for their proper upkeep and maintenance. The Portuguese accounts speak of the heavy prices which the Nayaks paid the Moors for good cavalry mounts. Elephants were mostly bought from the Portuguese who imported them from Ceylon. According to an arrangement made by Antao Vaz Fereira in 1607, the Portuguese were allowed to sell the elephants captured in the forests of Ceylon, only to the Nayak of Tanjore; and we find it stated 'according to the existing custom, the best purchaser being the Naik of Tanjore' in their records.[5]

4. *Sāhityaratnākara*, Chapter XIII, Sloka 5.

5. *The Portuguese in Ceylon*, Dr. Pieris. Also J. R. A. S., Ceylon Branch, Vol. 21, p. 102.

Nothing more is known of the way in which this huge army was officered or maintained. The king himself sometimes led the army to battle and took the field in person. Yagnanārāyana Dīkshita gives details of the materials required for erecting tents and also the other provisions that were carried by the soldiers. Reference has already been made to the soldiers taking with them a medicinal herb which had healing properties. No definite information is available from the sources regarding the navy of the Nayaks; however, the reference to small *dhonies* or junks in the Portuguese chronicles and which were used in the fighting on the Jaffna coast support the view that the Nayaks of Tanjore had small ships equipped with guns and soldiers with the aid of which they seem to have transported their troops to the coast of Ceylon and carried on their oceanic warfare.

Unlike the Madura Nayaks the Nayaks of Tanjore had no *pālaiyams** (i.e., feudal estates let out on condition of military tenure and with wide power of administration given to the holders) under them but there were numerous agents of the Nayak, who were in charge of small administrative divisions.[6] They were the official representatives of the Nayak and the collector of royal dues and taxes. The kingdom was divided into a number of divisions called *nādus*; and each *nādu* was further divided into several *māhānas* or *sēēmé*. Each *sēēmé* was composed of numerous villages, which were called by several names such as *ūr, kudi, mangalam, grāmam, kurichchi* etc. The village was the smallest administrative unit of the state and it was governed by village officials. Each village had a headman, a *kaṅakkan* (accountant) and a *talayāri* or watchman. The local needs of the village were attended to by these officials with the aid of representative householders, who formed a small council akin to our modern Panchayats. As the Nayaks did not seem to have introduced any change with regard to the village administration, it may be held that the old Chola system of rural administration was continued. John Neiuhoff says that 'each village has two judges, who are much respected by the inhabitants.'

*Definite conclusions on this point are not possible in the present state of our knowledge. Nayak rule, being feudatory in its origin; naturally tended to promote sub-infeudation of a kind. In the other Nayak states of Madura and Gingee, the grant of fiefs on a quasi-military tenure formed the general rule. The existence of fiefs like Papanad, etc., in Tanjore may point to some degree of prevalence of the same tendency, though it was largely limited by the nature of the village organisation.

6. The epigraphs mention a number of agents. One of such agents at Karaikal is called in the English Records, as the local governor.

The administration of justice was not based upon any elaborate establishment. In the villages, justice was administered by the village officials themselves with the aid of learned men and selected boards of arbitrators. Arbitration, however, was largely in vogue. Even disputes regarding ownership of property, were settled by the arbitrators. Dispute of a general nature involving social and religious rights were heard by the king, who was believed to be the fountain of justice. The Nayak was helped in his capacity as the final appellate authority by the *Pradhāni* and other learned men, who were summoned by the king on those occasions. In the absence of the ruler, the Pradhāni took his place and presided over the court generally called *Dharmasāla.* Trials were held in public in the sense that people were allowed to attend and to witness the trail but not to offer their opinions. An inscription from Pattīswaram refers to a settlement made by the Pradhāni of a dispute in which the Pattunūlkārars (weavers) and the Chettis (merchants) were involved. The petition or Vaḻakkumuṛai made to the Pradhāni was the result of a dispute regarding the procedure in the receipt of betel leaves and arecanuts during marriages. The exact details of the settlement are not available to us, but the reference to the vow made by both the parties to supply a new cloth worth five panams to the goddess of the local temple in case of transgression of the terms of this settlement, shows that the dispute was settled in a manner that was satisfactory to the contending parties.[7] Generally, punishments took the form of a fine or penalty but in extra-ordinary cases involving criminal offences, the culprit was put into prison where he was detained. The Jesuit letters refer to the prisoners, who were detained at the Vallam fort.

The coastal region was, at the several ports, in the hands of foreigners like the Portuguese, the Danes and the Dutch. The Nayaks do not seem to have possessed any control either fiscal or judicial over them. The Nayaks cared only for their revenue-returns from their trade operations, the regular payment of which maintained happy relations between them and the rulers of the land. A *cowle* given to the Dutch contains provisions by which Vijayarāghava Nayaka was obliged to hand over back to them such offenders, who might have escaped from their settlements in fear of punishment.

The main source of revenue was the land tax, besides taxes on various articles of merchandise. There were also taxes levied on different professions like the goldsmith's tax and the grazing tax.[8] According

7. 257 of 1927.

8. 22 of 1897 refers to the remission of taxes on goldsmiths. 460 of 1922 mentions the grazing tax of three panams per annum.

to the Jesuit evidence, the king took half of the produce of land as land tax. Payments were generally made in cash. A letter dated 1683 says that Ekōji was receiving money payments as revenue. Vijayarāghava's grant of a charter to the Dutch at Negapatam bears evidence to the existence of a mint at Tanjore. The Dutch, who were also permitted to issue coins of their own were asked to mint coins of the same weight and fineness as was done at the capital. However, sufficient details are wanting to explain in full the working of the revenue system, the nature of the taxes and their incidence. Another source of income was the rent paid by foreigners who had settled on the coast. The epigraphs mention a number of miscellaneous taxes as forming a source of the state revenue; but nothing is known about their character. Some of these taxes were made over to corporations and individuals in recognition of their meritorious services and also to temples and public charities. Lands also were gifted away to temples and charitable institutions free of taxes. The taxes were collected from the people by the village officials and remitted to the royal treasury.[9] The first item of expenditure was the remittance of the tribute due to the suzerain power. It is not known for certain, how much Tanjore paid as tribute; and Father Vico in his letter dated A.D. 1611 says that Tanjore had to pay an annual tribute of six to ten million francs.[10] The ordinary items of expenditure other than the tribute, included the maintenance of the army, public works and charities of public utility and welfare. As the Nayaks had not many poligars under them, they had to maintain a large army at a considerable cost. Large sums of money were spent towards the maintenance, construction and renovation of temples as the State had to look after the spiritual needs of the people. Much was also spent on public charities such as the maintenance of feeding institutions, also on public works like digging of tanks and canals for purposes of irrigation and also in building flights of steps leading to the bathing ghats at many places, on the banks of the Cauvery. Though the irrigational system of the land was fairly well laid by the Chōlas, yet the Nayaks seem to have added more irrigational facilities to the agriculturists by spending large sums of money on such projects. The epigraphs and the literary evidence refer to the construction of a dam across the Cauvery by Achyutappa Nayaka. Likewise numerous tanks were dug up for storing up water against the possible failure of monsoons.

9. 194 of 1922. Refers to the amount payable to the palace by the people (Ūṛavar) of the Nodiyūr village.

10. *La Mission du Madure*, Vol. II, p. 124.

Commerce was carried on mainly by foreign merchants and the Nayaks did not seem to have generally encouraged trade enterprise on the part of their subjects. The reference in inscriptions to the export and import duties shows that there was foreign trade but it was not conducted by the natives. There was however, a large volume of internal trade carried on by the native merchants. Large quantities of articles were transported from one place to another. Men and pack-animals were employed in the transportation of goods from place to place and the internal means of communication were not at all suitable for the rapid transport of commodities. As the highways were infested with robbers, the merchants generally travelled in groups. The English Factory Records speak of the foreign trade carried on by the Portuguese and the Danes on the Coromandel Coast. Reference is also made to the excellent quality of the Coromandel cloth. 'The goods made in the Naick's country far exceeds Pulicat in colours, goodness and cheapness.' Negapatam was the most important trading centre under the Portuguese merchants. Although Caesar Federike speaks of it 'as a country of small trade,' Barbosa gives a good account of the trade carried on there and also its importance. He says that "a large number of ships from Malabar sail hither every year, most of them to take cargoes of rice by which they make great profits, and they bring hither abundance of goods from Cambaya, copper, quick-silver, vermillion, pepper and goods of other kinds. In this province of Charamandel are also found many sorts of spices and drugs which come from the kingdom of Malacca, China and Bengal.' He also refers to the native Hindu merchants called Chettis, (the common caste title of the trading classes) and says that they were very cunning in every kind of traffic in goods. The English Records speak of pepper, calicoes, indigo used in Europe for dying, saltpetre, raw cotton yarn and fine cotton clothes as chief articles of export while the imports were broad clothes and other woollen stuffs chiefly of English manufacture, tin, lead, quicksilver, ivory from Africa, coral from the Mediterranean, gold and silver embroideries, sword blades, knives and glass. The foreign merchants are said to have made large profits.

Agriculture was the most important industry of the land and it flourished under the careful patronage and protection of the state. The state gave encouragement to this industry by providing irrigational facilities. Sugarcane also was grown on a large scale and the cultivation of cane fostered the manufacture of jaggery and sugar. However these industries were run only on a small scale. Fruit growing and gardening were other supplementary occupations of the people; and the Portuguese writers refer to the abundance of fruit that were available in the

land. The most important of the textile industries was the weaving of cotton cloth and the dyeing industry must have been highly developed, since the foreign evidence speaks in glowing terms, about the coloured and the painted cloth of the Coromandel Coast. Another industry that flourished under the Nayaks was the making of salt not only by those who lived near the coast, but also by inland people. The Nayaks fostered these industries as they were a source of revenue to the state. It may be said in passing that most of the articles needed for consumption were locally produced except a few luxuries like silk and glass, which were imported from outside.

The Nayaks continued the traditional Hindu attitude of religious toleration and impartial patronage by extending their patronage to all religious sects. Even though they were the followers of Vaishnavism yet, they supported all the Hindu sects. Sevappa Nayak's grant of lands in favour of a Muhammadan mosque at Tanjore, his permitting the Christians to come and settle in his country, his gifts to Siva temples and his grant of lands to the Madhwa teacher, Vijayīndra Tīrtha, all these show the general attitude of the Nayaks and his religious catholicity. His successors also were great patrons of all these institutions like him. The reference in the chronicles to the mass feeding of Brahmans done by the Nayaks, again stands testimony to their high regard and respect with which they left undisturbed the traditional classes and castes of society. The Brahmans seem to have enjoyed special privileges and their services were utilised for the good of the administration and for the welfare of the people. The three important religious faiths that received royal patronage were, Saivism, Vaishnavism and the Dwaita cult of Madhwa. The Nayaks were close adherents of their faith and as enjoined in the scriptures, they made pilgrimages to holy places. Both the *Raghunāthābhyudayam* and the *Sāhityaratnākara* speak of the austere lives led by the Nayaks. The social institutions of *Sati* and *purdah* were confined mostly to the royal and noble families. The Nayaks were all polygamists and the prevalence of *Sati* in the ruling family is proved by the foreign evidence of Jesuit letters. Both Rāmabhadrāmba and Yagnanārāyana Dīkshita refer to the presence of courtesans, who formed part of the society.

The Nayaks were great patrons of learning and it is said that about fifty four poets and men of letters lived and flourished during their time.[11] In spite of all this, yet it appears that the state did not take an active interest in imparting education to the public. There are no ins-

11. P. P. S. Sastri: Introduction to The Descriptive Catalogue of the Mss. in the Tanjore Serfoji Maharaja's Saraswathi Mahal Library at Tanjore.

criptions to show that they founded a public school, but at the same time it cannot be said that they were indifferent to the promotion of learning. Education was largely left to private enterprise but patronage was extended to them by grant of lands and other gifts. The numerous *agraharas* which they founded were all centres of learning but it was not open to all communities. Besides Sanskrit, Tamil and Telugu were also encouraged by them. They made liberal grants to *mathas* and temples which were also centres of learning. The presence of numerous poetesses shows the high level of culture and learning attained by women. The Nayaks attracted learned men from other parts by holding literary durbars frequently. It is said that the Telugu drama known as *Yakshagāna* had its origin during their time. The internal evidence bears ample testimony to the great interest evinced by the rulers in theatrical and other amusements such as the *Bommalātta* or figurine play.[12] The *Yakshagāna* is a dramatic composition 'set to music and sung and acted upon the stage accompanied by instrumental music.' Rāmabhadrāmba also mentions skilled women artists, who were past-masters in the art of dancing. Raghunātha is said to have witnessed such dance recitals and the palace itself contained a stage. There were also women, who could play on the musical instruments such as the *Veena* and the *Mridanga* and to the accompaniment of which the palace dancers danced in the presence of the king. Fine arts such as painting, sculpture and music reached a high level of perfection and excellence under them. (The *Raghunāthābhyudaya Nātakam* of Vijayarāghava refers to the decoration of the palace walls with portrait paintings depicting historical events and the coronation durbars.) The Nayaks' patronage of music and their high appreciation of it are all recorded in the chronicles. Raghunātha himself was a great lover of music and he was an accomplished *Veena* player. He wrote the *Sangītasudhānidhi* which was soon followed by the *Chaturdaṇdiprakāsika* of Vēṇkatamakhi. The latter is called the rejuvenator of *Carnatic Music,* while the former enriched the science of music by his original contributions such as the discovery of new *ragas* like Jayantasēna and *talas* called Rāmānaṇḍa.

The Nayaks of Tanjore thus largely contributed to the advance and progress of the material welfare of their subjects and even though they were not able to make any substantial contribution either to the science of politics or administration, yet they occupy an honourable place among great patrons, for their deep love of learning, encouragement and patronage of learned men, music and painting. The most notable contributions of their benevolent rule are still discernible in the field of lite-

12. *Raghunāthābhyudayam*, Chapter XII, Sloka 10.

rature and music. The present magnificent Tanjore Palace Library is said to have been enlarged from the nucleus left by the Nayaks. The important results of their rule were the migration of a large number of Telugu speaking people into the Tamil land and the evolving of a colloquial form of Telugu with a large admixture of Tamil words. Though they were Telugus by birth, they soon endeared themselves to the Tamil people by their benevolence, justice and love. Their rule was equally noted for its moderation as for its equity and though they were foreigners in the Tamil country at the time of their advent, they made Tanjore their home and became quickly an integral element of the country and continued the traditional policy of protection of the subjects and patronage of religion, arts and letters. Thus the Nayak rule in Tanjore forms, from the cultural point of view, a most pleasing epoch in the history of the South Indian people.

# The Hormic Theory

(BEING AN EXPOSITION AND A CRITICAL EVALUATION WITH ORIGINAL SUGGESTIONS FOR THE IMPROVEMENT AND EXTENSION OF WILLIAM McDOUGALL'S PSYCHOLOGICAL THEORY).

BY

P. S. NAIDU, M.A.,

*Annamalai University.*

An instinct, then, is "an inherited or innate psycho-physical disposition which determines its possessor to perceive, and to pay attention to, objects of a certain class, to experience an emotional excitement of a particular quality upon perceiving such an object, and to act in regard to it in a particular manner, or, at least, to experience an impulse to such action."[14] There are, then, three distinguishable elements in the innate mental structure designated instinctive. There is first, the perceptive aspect, secondly the central or emotional aspect, and thirdly the executive, active or behavioural aspect. If we keep our mind constantly alert and do not succumb to the usual temptations besetting the spatialisation of mental facts, then we can see clearly the significance of these three aspects as represented in the diagram below.

*An Instinctual Unit*

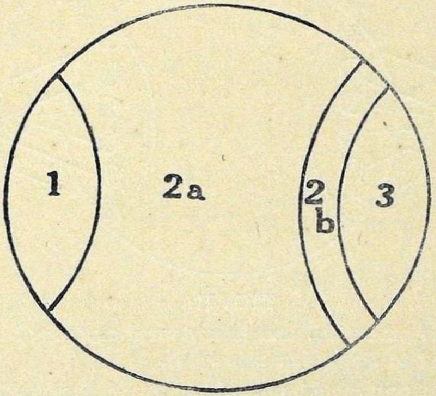



FIG. I

The Tripartite Conception of Instinctual Structure and Function
(1. *The perceptual aspect,* 2a. *The emotional aspect,* 2b. *The Expressions of Emotion and* 3. *The behavioural aspect*).

Let us, for the sake of simplicity consider a fundamental instinct, the instinct of flight or escape, with its concomitant emotion of fear. In its most primitive and elementary form, as it operates in the minds of very young children, it is stimulated by sudden loud rasping noise, sudden loss of support or physical pain; these excitants of the instinctive structure of the mind generate the emotion of fear, and the resulting behaviour is the loud cry of the child. In the case of the adult, the "objects" which excite fear may be many and varied, their number and quality being determined by experience. But, running through all of

14. *Social Psychology,* pp. 23-25.

them we may detect one common characteristic, namely, anticipation of pain, physical or mental. Experience teaches the adult to be afraid of many things and persons, and often the springs of fear sink deep down into the unfathomable (or unconscious) strata of the mind. The person who is the "patient" may not know why he is afraid or even of what. Similarly, on the final behavioural side too the adult has learnt to check and control his actions so that he might put on the mark of courage. The natural reaction of the adult to any object exciting fear, is flight to a place of safety, and lying hid in that place. So, the first and third aspects of an instinct are subject to considerable modifications in adult experience, and the only aspect which remains constant is the central affective or emotional aspect. The emotion pertaining to or con-

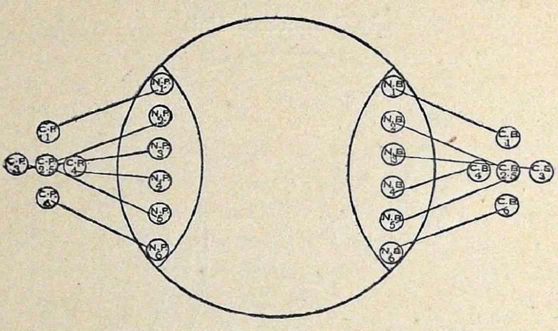


FIG. II.

Conditioning of the perceptual and behavioural aspects of the instinctual structure of mind according to Pavlovian principles.

N.P. 1—6 are the natural stimuli which excite the perceptual aspect of the instinctual structure of the mind. C.P. 1—6 are the artificial or conditioned stimuli which replace N.P. 1—6 according to the principles laid down by Pavlov.

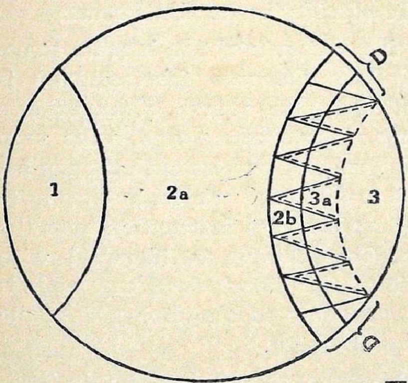
N.B. 1—6 are the natural acts of behaviour.

C.B. 1—6 are the learnt or conditioned acts which replace N.B. 1—6 respectively.

comitant with the instinctive structure of mind has, therefore, been held by McDougall to be of considerable importance, as it enables us to identify the instinct at work. "....the afferent or receptive part and the efferent or motor part are capable of being greatly modified, independently of one another and of the central part, in the course of the life history of the individual; while *the central part persists throughout life as the essential unchanging nucleus of the disposition.* Hence in man, whose intelligence and adaptability are great, the afferent and efferent parts of each instinctive disposition are liable to many modifications, while *the central part alone remains unmodified;* .........the emotional excitement,......, is the only part of the total instinctive

process that retains its specific character and remains common to all individuals and all situations in which the instinct is excited....*each kind of emotional excitement is always an indication of, and the most constant feature of, some instinctive process.*"[15] An emotion, then, is the central, invariable, distinctive, characteristic aspect of every instinctive process. *This simple relationship, which is scientifically accurate, between instinct and emotion, was perceived clearly for the first time by McDougall, and its formulation in clear psychological terms is one of the outstanding contributions of our author to psychological theory.* We shall return later to a detailed discussion of this very important topic of the nature of instinct—emotion relationship. At this stage, however, in order to make the hormic picture of the structure of instinct complete in all its details, we must notice the connection between the *expression of emotion*, and the *expression of the instinct* in the form of action or behaviour.

*An Instinctual Unit*




1. The perceptual aspect.
2a. The emotional aspect.
2b. The expressions of emotion.
3. The behavioural aspect.
3a. The expressions of instinct.

FIG. III

The *expressions* of the emotions and the *expressions* of the Instinct.
(The dovetailing in the region marked DD is to be noticed.)

When an instructual structure of the mind is stimulated by an appropriate excitant, then, there surges up a specific emotion which has its own bodily counterparts. These expressions of the emotion, both internal and external, have been studied carefully and recent developments in endocrinology have served to throw valuable light on the whole problem of the utility of these neuro-muscular and glandular activities. In fear, for example, the occurrence of the heightened activity of the adrenals, and the heart; the cessation of digestive activities; the withdrawal of the blood stream from the face, stomach and inte-

15. *Social Psychology*, p. 29. (*Italics ours*).

stines, and its concentration in the muscles to be exercised in flight; and such other activities have been carefully studied, and it has been shown how these are all directed towards one definite aim, namely, that of helping and accelerating the activity appropriate to the instinct, of which the emotion is the central aspect. Flight, is the natural activity pertaining to the instinct of escape, and all the "expressions of the emotion" of fear are organised to serve the cause of "flight". The expressions of the emotions fit snugly into the activity of the instinct and further that activity. This observation is true *generally* of all instincts, and it is well to remember that sustained and patient experimentation is at the back of this hormic conclusion.

We should remind ourselves that our discussion is confined to the primitive, natural level of mental structure, and that the more sophisticated levels of behaviour will be dealt with later. No purpose will be served by confusing the higher sentimentative level of human behaviour with the primitive instinctual level, and applying the principles properly belonging to the latter for the elucidation of the former.

The picture, then, that we get of the elements of the hormic structure of the mind is that each one of these elements (or instincts) is excited by certain natural stimuli which in the course of experience may be replaced or added to by many others, having sometimes very remote and slender connections with the original excitants (and may be, no connection at all). The process of conditioning which has come to exercise a wide-spread (but not altogether healthy) fascination over the minds of psychologists belongs here. Conditioning is identical with the process of grafting in trees. Without the living stem the graft is worse than useless. The instinctive structure is the living dynamic stem in the grafting process known as conditioning.

The appropriate excitant having been received by the instinct, there surges up the emotion, the constant central aspect, whose expressions flow into the last or behavioural aspect and help to sustain or accelerate it. But, as in the case of the first aspect, the last also is subject to very considerable modifications through experience. It is supposed to be the high water mark of the so-called civilised behaviour of the modern age to inhibit completely the natural activity appropriate to the basic instincts of human nature. Such inhibition carries with it the inhibition of some of the more marked outward expressions of the emotion of that instinct.

### *Section X. The Hormic list of Instincts.*

The significant question now arises, "How many of these basic elements (called instincts), which hormic psychology has isolated and

*A Comparative Statement of Fundamental (mental) Structures as developed in McDougall's three great works.*[16]

| | *Social Psychology* 1 | *An Outline* 2 | *Energies* 3 |
|---|---|---|---|
| 1. | Flight (*Fear*) | (f) Escape (*Fear*) | (d) Fear |
| 2. | Repulsion (*Disgust*) | (e) Repulsion (*Disgust*) | (b) Disgust |
| 3. | Curiosity (*Wonder*) | (c) Curiosity (*Curiosity*) | (e) Curiosity |
| 4. | Pugnacity (*Anger*) | (b) Combat (*Anger*) | (j) Anger |
| 5. | Self-abasement (*Subjection*) | (h) Self-submission (*Subjection*) | (i) Submission |
| 6. | Self-assertion (*Elation*) | (i) Self-assertion (*Elation*) | (h) Self-assertion |
| 7. | Parental Instinct (*Tender Emotion*) | (a) Parental or Protective instinct (*Tender Emotion*) | (f) Protective or Parental instinct |
| | Some other instincts of less well-defined emotional tendency. | | |
| 8. | Reproduction | (i) Mating (*Lust*) | (c) Sex |
| 9. | Gregariousness | (j) Gregariousness | (g) Gregariousness |
| 10. | Acquisition | (k) Acquisitiveness (*Ownership*) | (m) Acquisition |
| 11. | Construction | (l) Constructiveness (*Creativity*) | (l) Construction |
| 12. | | (d) Food-seeking (*Gusto*) | (a) Food-seeking |
| 13. | | (m) Appeal (*Distress*) | (k) Appeal |
| | | Some Minor Instincts | |
| 14. | | (n) Laughter (*Amusement*) | (n) Laughter |
| 15. | | | (o) Comfort |
| 16. | | | (p) Rest or sleep |
| 17. | | | (q) Migration |
| 18. | | | (r) Simple bodily needs. |

16. The letters within brackets in columns 2 and 3 indicate the order in which the elements of mental structure are discussed in *An Outline* and *Energies* respectively.

analysed with such clarity, are there in the human mind?" McDougall has given different answers in his different epoch marking books, and this fact has been used as one of the arguments against the validity of the hormic theory. We are familiar with the phenomenon of the steady increase in the number of chemical elements. From a little over seventy, the number has come up to a little less than hundred. Yet, no one has felt the need for attacking the foundations of chemistry, because it has been adding to the list of its elements. If through addition to knowledge it is found that there is need to add to the basic elements of the constitution of human nature, one need not take any objection to the expansion of the list of instincts. If we keep this important consideration in mind we shall not easily be tempted to do injustice to the contributions of hormic psychology in this field.

The table (*vide* page 331) sets forth clearly the development of McDougall's conception of the number and nature of the fundamental elements of human mental structure. In the earliest work, *"An Introduction to Social Psychology"* (1908), the list is short, containing only seven major instincts and four minor ones, the line of distinction being decided by the fact that the former have well-defined emotions, while the latter lack such clear identifying central affective tendencies. Distinctness of emotion is here made the test for the recognition of an independent instinct. In *"An Outline of Psychology"* (1923) the name instinct is still retained, though there are included in the list, which is nearly twice as long as the original list in the Social Psychology, many instincts which do not have any clearly distinguishable emotions. McDougall chooses to name the affective aspects of these, after the instincts themselves with the prefix "feeling of." It will also be noticed that there are not many changes in the names of the instincts. But, when we come to the *Energies of Men* (1932) we meet many fundamental changes. The term "instinct" is abandoned, and replaced by "propensity". A new conception, that of "ability," is introduced. The names have been altered. In many instances the propensities are given the names of the emotions. The "Emotion" test is abandoned, and the list is nearly trebled. Along-side these changes, a fundamental change in McDougall's view of instinct has occurred. A criticism of this change will constitute the main theme of one of the later parts of this monograph. At present, it is sufficient to note that that there is an evolution in the hormic conception of the instinctual structure of the mind.

### *Section XI. The Hindu and Hormic lists of Instincts.*

We may, in passing, make a remark of great interest, and of some importance to our general theme. Ancient Hindu Psychology, working

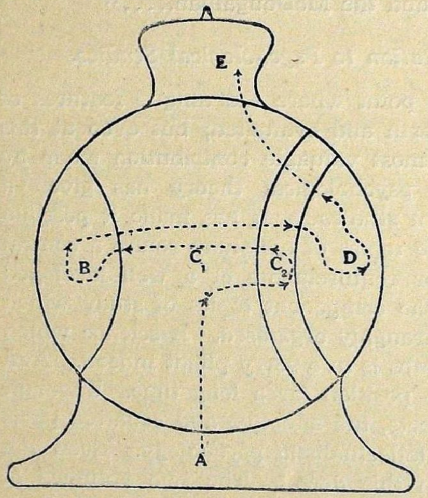
in the field of aesthetics, put forward a list of elements of human mental structure similar to McDougall's first list. In the Rasa (or aesthetic) scheme of the ancient literary critics eight Sthāyi Bhāvas (or fundamental propensities) were recognised. These were anger, fear, disgust, wonder, assertion, mirth, love and sympathy. The first eight elements mentioned in the first column of the comparative table seem to have been admitted by Hindu Psychology, except submission, which was evidently identified with fear. Sympathy is not considered to be a separate instinct by McDougall, but only a peculiar characteristic of all instincts. What was said in another context may be repeated here with profit. " The sthāyi bhāvas are the propensities of western psychology, and of these Krodha, bhaya, jugupsa, and vismaya may be accepted as being really elemental. Hāsya should be interpreted as laughter, and rati as simple sex passion (or lust). Śoka is not elemental, and so it should be replaced by tender emotion which is the most fundamental component of the complex texture of śoka. Utsāha should be replaced by self-assertion. With these modifications we may accept the foundation of the Rasa theory....There is remarkable resemblance between the two lists—the Hindu and the McDougallian.....[17]

### *Section XII. Hormic Orientation to Psychological Studies.*

We have not yet reached the point where the unique features of hormic psychology could be set forth and evaluated; but even at this early stage it is well to notice a most valuable contribution made by hormic psychology. McDougall's psychological theory has given a definite orientation to psychological studies. It has made it possible for the psychologist to organise the topics of his study round a central dynamic point. One of the major requirements of a well-developed science is that its parts (that is, the component topics of study which constitute the whole) should be throughly organised. A science which lacks internal organisation in its limbs is in a sorry plight indeed. And psychology was in this unenviable position far a long time. Through overemphasis on the cognitive aspects, the affective and conative parts were hard to fit into a purely intellectualistic psychology. Even the great work of James suffers from this defect. The two volumes of his work, "*The Principles of Psychology*", are in conflict with each other, because two conflicting principles govern the outlook in these tomes. The elementary text books, dealing with the so called faculties, lack internal cohesion. A well known and popular text-book like Angell's *Psychology* suffers from this defect. Starting with a consideration of

17. Naidu, P. S., " The Rasa Doctrine and the Concept of Suggestion in Hindu Aesthetics." Journal of the Annamalai University, Vol. X, 1940.

the general nature and aim of psychology, the author enters into a description of the nervous system, and then he places before us Chapters on Attention, Sensation, Perception, Memory, Imagination, Reasoning, Feeling, Emotion etc. Each chapter might very well constitute a monagraph. If we look at a recent book such as Professor Woodworth's Psychology, the situation is not any different. The order of chapters is changed, but the same incoherence persists. There is no binding principle or thread running through all the chapters, uniting them and conferring point and purpose on them. In other words, psychology as expounded by these authors lacks a great orienting principle. And McDougall's hormic theory, for the first time in the history of psychology, has endowed the whole science with an orienting concept, the concept being the hormic theory itself. *Purpose* is the orienting concept for which psychology has been waiting all these years. Its entry into our science has immediately given the proper direction to all the topics usually discussed, and has generated a vital and dynamic inter-relation beween them. The following diagram indicates at a glance the result of hormic orientation to psychological studies.




*Major Topics of Study.*

A: Basic activity. Purpose, Instinct and Sentiment.

$C_1$ & 2: Emotions and Feeling, and their expressions.

B: Intelligence, Learning, Memory, Imagination, Observation (including Attention and Perception) and Thinking.

D: Reflex, Habit and Voluntary Action

E: Character and Personality.

FIG. IV

Reorganisation, according to Hormic Principles, of the ordinary topics of study in an introductory course in Psychology.

(The dotted lines and arrows indicate the sequence of Topics.)

The central theme of the whole psychological study of men and animals is purposive behaviour. Hence the opening chapters of a properly written book on psychology will deal with behaviour, and with

the innate mental structure whose function is behaviour, that is, the instincts (or the basic elements of structure) and their emotions will be the main theme of the introductory chapters, and lest the confusion which persists should last longer, it will be shown how these basic elements are organised into sentiments, and how these sentiments are the immediate activating causes of behaviour. The detailed analysis of the structure of the basic innate elements of mental constitution will be made, and the relationship between the cognitive, affective and conative aspects will be clearly displayed. In the next section the general nature of emotion and feeling, and the affective tone of the working of instinctual structures—namely, pleasure and unpleasure—will be discussed. In the third section the various topics of traditional cognitive import will be dealt with, but at every stage, and even at the risk of causing inconvenience by monotonous repetition, it will be pointed out that sensation, perception, attention, learning, observation, memory etc., have no meaning and no function to fulfil apart from conation. All these processes will be displayed as merely the results of the flowering out of the first aspect of the instinctual structure of the mind. They are merely so many ways in which the first or perceptive aspect of the basic structure works. It is conation that confers meaning, continuity and value on these processes. As Alexander rightly pointed out "there is no element of cognition in the mental process itself." The discussion of the ubiquitous "conditioned Reflex" will belong here, and it will be shown how this type of reflex can flourish only on a conative basis. The last section will deal with the active side of mental structure. Will, choice, habit, decision etc., will be covered by this section. And finally the crowning problem of personality will be taken up and all the threads will be gathered up in the hormic discussion of character. Thus, nothing that was discussed by the older types of inchoate psychology will be lost sight of. All the topics will be preserved; they will be made living and dynamic members of a purposefully organised system of study controlled and animated by a single aim—the establishment of the hormic theory. Such a well oriented science of psychology has been made possible by the genius of McDougall and Freud.

## CHAPTER II

# INSTINCT, BEHAVIOUR AND SENTIMENT

### *Section I. The Hormic Theory again.*

Even at the risk of causing some inconvenience to the reader by repetition, it becomes necessary to state the hormic theory again, because it has been misunderstood, sometimes wilfully, but often through ignorance. The theory has been stated in a most admirable manner by McDougall himself in "An Outline of Psychology." "The view that all animal and human behaviour is purposive in however vague and lowly a degree, and that purposive action is fundamentally different from mechanical processes, may be conveniently called the *hormic theory.* The word "hormic" is from the Greek "horme" which means a vital impulse or urge to action. Professor T. P. Nunn expounds the theory clearly in his book "Education, Its Data and First Principles." and McDougall in quoting from this work says, "starting from the position that there is more than physics and chemistry even in the humblest animal, it (the hormic theory) comes to view the history of life as a striving toward the individuality which is expressed most clearly and richly in man's conscious nature, and finds, therefore, in that goal toward which the whole creation moves the true interpretation of its earlier efforts."

"We need a name for the fundamental property expressed in the incessant adjustments and adventures that makes up the tissue of life. We are directly aware of that property in our conscious activities as an element of "drive", "urge" or felt tendency toward an end. Psychologists call it *conation*, and give the name *conative* process to any train of conscious activity which is dominated by such a drive...... To this element of drive or urge, whether it occurs in the conscious life of men and the higher animals or in the unconscious activities of their bodies and the (presumably) unconscious behaviour of the lower animals, we propose to give a single name *horme.* In accordance with this proposal all the purposive processes of the organism are hormic processes, conative process being the sub-class whose members have the special mark of being conscious. ....the hormic processes undergo a "development in which they become organised into ever wider and more complex hormic systems. Beginning as a cell in his mother's body, a very part of her flesh, he (each man) becomes a "parasite" nourished by her blood and feeding on her food, yet already a being with a life and destiny of his own. The hormic processes, both conservative and creative, in which

that life consists, are still mainly unconscious though, as his nervous system determines and his sense organs form, his "Will to live" may be enriched by some vague conational, that is, conscious elements, while he still lies in his mother's womb. As soon as he has left her body and has entered on the long task of picking his way through the labyrinth of the outer world, the conational elements acquire a new significance, and their development becomes the centre of the Spectator's interest. Conation rises from the level of blind, or purblind, impulse to that of clear-eyed desire and eventually from the level of desire seeking an immediate good to that of will fixed upon a distinct and perhaps ideal goal. Meanwhile, subserving this advance in the character of the horme, there is a parallel development in its organisation—showing itself first in the emergence of his physiological organs and in the correlation of their functions, then after birth, in the co-ordination of the powers of sense and movement in systems of ever-increasing complexity and effectiveness, and lastly in the gradual building up of great conative hierarchies, which determine the form of the man's individuality and are the measure of his life's achievement."

The general foundation for the hormic theory as sketched by Professor Nunn has been adopted by McDougall, and the structure built upon it by scientific methods has been discussed by us. Two points in the discussion have to be singled out for special mention and emphasis because the wide-spread misunderstanding of the hormic theory arises out of them. In the first place it should be remembered that McDougall uses the term *instinct* in a highly specialised and technical sense. Its connotation is as rigorously and clearly defined as that of *force* in physics or of *species* in biology. It is no excuse for muddled thinking to say that instinct is used very loosely in popular speech, and so McDougall should have avoided the term in his system. *Force* and *species* too are used vaguely and loosely in popular speech. Yet no scienfist is worried by this double usage. Why should a concession conceded to the physical and biological sciences be denied to phychology ? In a way McDougall did give in to his critics by removing instinct from his psychology and using *propensity* in its stead. But he need not have yielded even an inch of his hard won ground. It is this apparent climb down that is responsible for a great deal of confusion in the subsequent development of his system.

### *Section II. Instinct and its Motor mechanisms.*

Instinct, as a fact of mental structure, embraces three aspects, the cognitive, the emotional and the behavioural, and no one of these taken by itself may be called " instinct ". Popular misconceptions arise

out of a tendency to get pre-occupied with the last aspect alone. We can, however, understand this fallacy and sympathise with the deficient mentality behind it, for the popular mind is not gifted with powers of analysis, nor does it know how to argue from observed facts to causes which control the facts. But when scientists commmit the same fallacy we are puzzled and often discouraged.[1] Long lists of instinctive activities are given by the behaviourists and others who place undue emphasis on the working of the neuro-muscular mechanism of instincts. Hunting has been very widely described as an instinct; eating is another instinct; and so are swallowing and digesting. Commenting on this tendency to multiply the number of innate capacities McDougall writes, " they postulated strange instincts of all kinds as lightly and easily as a conjurer produces eggs from a hat or a phrenologist discovers bumps on a head."[2] "Lightly to postulate an indefinite number of variety of human instincts in a cheap and easy way to solve psychological problems, and is an error hardly less serious and less common than the opposite error of ignoring all the instincts."[3] It will be seen at once that hunting, eating, swallowing and digesting are merely so many stages in the last aspect of the food-seeking instinct. In the same way many reflexes and acquired motor skills are used in the service of the innate instinctive structure of the mind, just as a well organised rail-route may be used in the service of commerce, travel, business, pleasure and military transport. The muscular activities mentioned above are not instincts, but only parts of instinctive organisations which are mental in essence. If it be remembered that an instinct, as the term is used in hormic psychology, is a fact of mental organisation, this blunder of identifying motor activity with instinct can be easily avoided. An instinct does, of course, involve, instinctive activity, but it embraces much else besides. It includes an emotion and a cognitive disposition. To neglect these two factors and to call the activity alone instinctive is inexcusable in hormic physology. McDougall is very clear on this point. " I see no reason " he says, " why these complex coordinated movements should be regarded as the expressions of so many distinct instincts. In my view they are essentially the expressions of motor mechanisms....... *We have to regard such motor mechanisms not as instincts, but merely as the instruments of instincts* ".[4]

1. L. L. Bernard in his book on "Instinct" discusses the outrageous use which the term has been put to.
2. Social psychology, p. 7.
3. *Ibid.*, p. 75.
4. An Outline of Psychology, pp. 116-117.

The relation between instinct and behaviour is of the utmost importance in hormic psychology. In the early days of his academic career McDougall looked upon psychology as " the positive science of the conduct of living organisms." Even the extreme behaviourist can find nothing in this definition that will not gladden his heart. The charge that the leader of the hormic school shifted attention from facts of human behaviour to preoccupation with abstractly over simplified elements and relations is without any foundation. In fact McDougall attaches such great importance to social behaviour that he lays it down almost as a dictum that no *psychology* can lay claim to recognition as a science unless it is in a position to explain the behaviour of man in the group. Behaviour, therefore, is of the utmost importance to the hormic psychologist. It is, however, not the behaviour of a machine or an automaton, but that of a living organism. This organism has a mind, and it is in this mind, its structure and dynamic working that the final explanation for behaviour should be found. When McDougall found that his emphasis on behaviour was likely to create the impression that he was a *behaviourist*, he made haste to clarify his position by demonstrating that behaviour as studied by the proper type of psychology points unmistakably to the existence of a behaving mind. Of the purposive nature of behaviour, and of the hormic nature of the energy activating the behaving mind we have said enough. We have now to study how the dynamic structure of mind, as sketched in the theory of instincts evolves, with the growth of experience, giving rise to highly complicated units which serve as the immediate stimuli to activity.

The topic is of such great importance to the contemporary psychologist that it will bear elaboration a little further. Instinct is not to be identified with the motor mechanism of instinct. The point that we are urging here is that psychologists are still committing today the old fallacy of identifying the motor mechanism with the innate mental structure which activates the mechanism. They refuse, (one is tempted to say wilfully), to read aright the findings of McDougall. They persist, despite McDougall's warning, in confounding structure with function, and in mistaking the part for the whole. Warren's *Dictionary of Psychology* makes the following observation in connection with the definition of *Instinct*:

' Contemporary uses of the term vary in all degrees between the extreme mechanistic meaning of a *response pattern,* and the extreme purposivistic meaning of an *inner spring* leading to accomplishment of a certain biological end." The antithesis between *response* and *inner spring* is meant to be extreme and exclusive. The two are poles apart. That the latter may be viewed as including the former is a possibility which

is ruled out by the definition. So great is the hold which this mechanistic view has obtained over the minds of psychologists that McDougall was forced to state his position in emphatic terms. "*An instinct*....is something very different" says our author, "from the instinct of the mechanistic behaviourist....; for them (the mechanists) an instinct is merely an "action-pattern", a system of reflex arcs in the nervous system which, on being appropriately stimulated, leads to nervous excitation through a fixed system of channels to a certain group of muscles and glands. *In contrast to this, the instinctive disposition of the hormic psychology generates an impulse towards a goal of a certain type*; and this impulse may express itself in strivings that may take a multitude of forms and bring into play a variety of muscular and other executive processes according to the circumstances; this variety being greater, the greater creature's power of intelligent appreciation of the circumstances and of intelligent adaptation of its actions to those circumstances".[5]

In driving the point home that "instinct" is not to be misunderstood as the action-pattern, McDougall points out that many different patterns may be used in the service of the same instinct, and the same pattern in the service of different instincts. Moreover, on the cognitive side too, we find the same principle in operation. So all behaviouristic conceptions, as well as those which are allied to them, break down completely. Instinct embraces the motor mechanism and much else besides. Its main spring is in the mind, not in the nervous system.

5. An Outline of Abnormal Psychology, p. 19.

# Studies in Sanskrit Texts on Temple Architecture with Special Reference to the Tantrasamuccaya

By

N. V. Mallayya

# BHĀVANĀVIVEKA

BY

MAṆḌANAMIŚRA

WITH

VIṢAMAGRANTHIBHEDIKĀ

BY

NĀRĀYAṆA

*Edited with Introduction*

BY

V. A. RAMASWAMI SASTRI

AND

K. A. SIVARAMAKRISHNA SASTRI

**नन्वेवं भावनाया अपि साध्यरूपायाः [1]प्रतीतेर्भावनान्तरापातः, तदपि [2]तथैवेत्यनवस्था। [3]यदपि मतं [4]व्यापारो हि [5]सा, रूपमेव तस्याः [6]तादृशमपराधीनोपजननम्, [7]अतो रूपात्तथात्व-**

सिध्यतु, परवस्त्वर(स्तात्त्व)र्थभेदोऽपि साधयिष्यते। तस्मान्न कचिद्भावाभावे करोतेः प्रयोग इति न तस्य धात्वर्थसामान्याभिधायित्वम्, अपि तु भावनाभिधायित्वमेवेति द्वितीयश्लोकोक्तमपि दूषणं परिहृतम् ॥

इदानीं 'सर्वत्र यदि धात्वर्थे भाव्यस्यै(व्यं सै)वास्तु भावना' इति पूर्वोक्तं दूषणमुत्थापयन् पूर्वपक्षवादी चोदयति—नन्वेवं भावनाया अपि साध्यरूपायाः प्रतीतेः भावनान्तरापातस्तदपि तथैवेत्यनवस्थेति ॥ अयमभिप्रायः—[8]यथा तिङन्तेषु धात्वर्थस्य साध्यताप्रत्ययः प्रत्ययाभिधेयभावनासंस्पर्शकृतो न स्वाभाविकः सम्भवतीति प्रत्ययाभिधेया भावना अभ्युपगता, तथा भावनाया अपि साध्यरूपताप्रतीतिर्भावनान्तरसंस्पर्शकृतेति भावनान्तरकल्पनाप्रसङ्गः, तस्या अपि साध्यताप्रतीतिर्भावनान्तरसंस्पर्शकृतेति अनवस्था स्यादिति। अनवस्थादोषपरिहारं शङ्कते—यदपि मतं व्यापारो हि सा, रूपमेव [9]तस्याः तादृशमपराधीनोपजननम्। अतो रूपात्तथात्वसिद्धिर्नान्यसंस्पर्शव्यपेक्षितेति ॥ अयमभिप्रायः—स्वयमेव व्यापाररूपो(पा) भावना, साध्यस्वभावत्वात्। तथाहि—[10]रूपमेव हि तस्यास्तादृशमपराधीनोपजननम्—[11]अपराधीनमस्या उपजननम्। नह्यस्या भावनान्तराधीनं जन्म घटादीनामिव। यथा संवेद्यानां विषयाणां ज्ञानात्संवेदनमन्यज्जायते[12] न तथा संवेदनस्यान्य-

१. 'प्रतीतेः' नास्ति—**ग, घ, ङ.**
२. तथेत्यनवस्था—**क, ख, ग, घ, ङ.**
३. यदि मतं—**क, ख, ग, घ, ङ.**
४. व्यापारोऽपि सद्रूपमेव—**क, ख.**
५. सा स्वरूपमेव—**ग, घ**; सारूप्यमेव—**ङ.**
६. तादृशं पराधीनोप—**ग, ङ**; तादृशमपरानोप—**घ.**
७. अतः स्वरूपात्—**ग, घ.**
८. तथा तिङन्तेषु—**छ.**
९. तस्यां—**छ.**
१०. 'रूपमेव हि' नास्ति—**च.**
११. न च पराधीनं—**छ.**
१२. -मन्यज्ज्ञायते—**च.**

**सिद्धिः[१] नान्यसंस्पर्शव्यपेक्षितेति[२], धात्वर्थोऽपि [३]तर्हि तथा अस्तु। तथा हि—[४]सोऽपि वस्तुतस्तथाभवन् न वा आपादित-तथाभावः स्वशब्दैः व्यापारात्मोपादीयते; [५]घञादिष्वपि कारक-सम्बन्धोपपत्तेः, अन्यथा अव्यापारे कारकसम्बन्धायोगात्, अव्या-पार[६]सम्बन्धिनः कारकत्वानुपपत्तेः, क्रियासम्बन्धप्रभावितत्वा-**

---

तोऽन्यत्संवेदनम्, स्वभावत एव तथात्वात्। एवं स्वभावत एव भावनायास्साध्यताप्रतीतेः भावनान्तरसंस्पर्शानपेक्षत्वान्नानवस्थाप्रसङ्ग इति। एतन्निराकरोति—धात्वर्थोऽपि तर्हि तथा अस्त्विति॥ एतदेव प्रपञ्चयति—तथा हि—सोऽपि वस्तुतस्तथाभवन् [७]न वा आपादित-तथाभावः स्वशब्दैः व्यापारात्मोपादीयते इति॥ अयमर्थः—यथा भावना (स्व)रूपादेव साध्या न भावनान्तरमपेक्षते, धात्वर्थोऽपि तर्हि तथा अस्तु। तथा हि—सोऽपि वस्तुतस्तथा भवन्—साध्यस्वभावो भवन्, न वा---अतथाभवन्, स्वशब्दैरेवापादिततथाभावः आपा-दितसाध्यभावः व्यापारात्मोपादीयते---यथा ध्वनिश्वैत्यादयः स्निग्ध(सिद्ध)स्वभावा अपि शब्दैरापादितसाध्यभावा व्यापारात्मतयोपादीयन्ते 'ध्वनति घण्टा', 'श्वेतते प्रासादः' इति। एवञ्च सति घञादिष्वपि कारकसम्बन्धोपपत्तिरित्याह---घञादिष्वपि कारकसम्ब-न्धोपपत्तेरिति[८]॥ अयमर्थः—देवदत्तेन काष्ठैः स्थाल्यामोदनस्य पाकः इति पाकशब्दार्थेन काष्ठादीनां कारकत्वेन सम्बन्धो दृश्यमान एवमेवोपपद्यते इति। अव्यापारात्मनि तु धात्वर्थे नायं सम्बन्ध उपपद्यत इत्याह—अन्यथा अव्यापारे कारकसम्बन्धायोगादिति॥ अव्यापारे

---

१. सिद्धेः—**ख, ग, घ, ङ.**
२. व्यपेक्षेति—**ख, ग, घ, ङ.**
३. 'तर्हि' नास्ति—**ङ.**
४. सोऽपि तथाभवन्नवा आपादित—**क**; वस्तुतः सोऽपि तथाभवन् वा आपादित—**ख**; वस्तुतः सोऽपि तथा अतथा वा भवन्नापादित—**ग, घ, ङ.**
५. घञन्तादिष्वपि—**ग, घ, ङ.**
६. संबन्धिना आकारत्वा—**ख.**
७. न वा तथा भवन् भावस्वशब्दैः—**च.**
८. पत्तिरिति—**छ.**

**त्कारकभावस्य। बुद्धिभेदस्तु पाकादिषु [1]प्रत्ययोपात्तेन [2]सिद्ध-भावेनाभिभवात्, [3]अनभिभवाच्च पचत्यादौ। [4]तच्चानभिभूतं रूपमन्यथाशक्यनिदर्शनं[5] व्यापारान्तरसंस्पर्शेनैव[6] निदर्शयन्ति[7] भावनाया इव। नच [8]सिद्धसाध्यतयोरैकशब्द्यं[9] विरुद्धम् भेदाभेद-**

---

धात्वर्थे कारकसम्बन्धस्यायोगादित्यर्थः। एतदेव प्रपञ्चयति—अव्यापारसम्बन्धिनः कारकत्वानुपपत्तेः क्रियासम्बन्धप्रभावितत्वात्कारकभावस्येति॥ एतदुक्तं भवति—व्यापारसम्बन्धिन एव कारकत्वम् न सिद्धपदार्थसम्बन्धिनः, राजपुरुषादिष्वदर्शनात्। नच घञन्तादिषु तिङभिधेयो व्यापारोऽस्ति। तस्माद्धात्वर्थ एव धातुना व्यापारात्मा अभिधीयते कारकसम्बन्धोपलब्धेरित्यभिप्रायः। नन्वेवन्तर्हि घञन्ते तिङन्ते च धात्वर्थविषयः सिद्धसाध्यरूपेण बुद्धिभेदो दृश्यमानो विरुध्येत, उक्तन्यायेन सर्वत्र साध्यताप्रतीतिप्रसङ्गादित्याशङ्क्याह—बुद्धिभेदस्तु पाकादिषु प्रत्ययोपादानेन(त्तेन) सिद्धभावेनाभिभवादनभिभवाच्च पचत्यादाविति॥ अयमाशयः—घञाद्यन्तेषु घञादिप्रत्ययोपात्तेन सिद्धभावेन धात्वर्थसाध्यत्वस्याभिभवात् अनभिभवाच्च पचत्यादौ नोभयत्र बुद्धिभेदो विरुध्यत इति॥ यच्चार्थभेदनिदर्शनं कारणमुक्तम्, तदप्यन्यथासिद्धत्वान्न धात्वर्थातिरिक्तप्रत्ययाभिधेयभावनासद्भावसाधनायालमित्याह—तच्चानभिभूतं रूपमन्यथाशक्यनिदर्शनं व्यापारान्तरसंस्पर्शेनैव निदर्शयन्ति भावनाया इवेति॥ अयमर्थः—यद्धात्वर्थस्यानभिभूतं साध्यं रूपम्, न तद्व्यापारान्तरसंस्पर्शमन्तरेण शक्यते निदर्शयितुमिति व्यापारान्तरसंस्पर्शेनैव [10]निदर्शयन्ति, न व्यापारान्तरसत्तया, भावनाया इव—यथा भावनां

---

१. प्रत्ययोपादानेन—क, ख, ग, घ, ङ.
२. सिद्धभावनानुभवात्—ग, घ, ङ.
३. अनभिभवात्पचत्यादौ—क, ख; अनभिभवति चेत्यादौ—ग, घ, ङ.
४. न चानभि—ग, घ, ङ.
५. शक्यनिरूपणं-क, ख; शक्यम् घदर्शनं—ग, घ, ङ.
६. 'एव' नास्ति—क, ख, ग, घ, ङ. निदर्शनेन—ग, घ, ङ.
७. निदर्शयति—ग, घ, ङ.
८. सिद्धतासाध्यतयोः—क, ख; सिद्धसाध्ययोः—ग, घ, ङ.
९. ऐकाधिकरण्यं—क, ख
१०. निदर्शयति—छ.

**योरिव गोत्वादिषु, भिन्नप्रकृतिप्रत्ययोपादानत्वात्। [१]भाव्यरूप-प्रतीतिनिदर्शनाभ्याञ्च[२] धात्वर्थस्य [३]तिङन्तेषु भावनामिच्छतो**

---

करोतीति व्यापारान्तरसंस्पर्शेनैव तस्या अनभिभूतं साध्यरूपं [४]दर्शयन्त्यन्तरेणापि व्यापारान्तरम्, तथेहापीति[५]। नन्वेकधात्वर्थसम्बन्धिनोः सिद्धसाध्यत्वयोरेकेन पाकशब्देनाभिधानं विरुद्धमित्याशङ्क्याह—न च सिद्धसाध्यतयोरैकशब्द्यं विरुद्धम् भेदाभेदयोरिव गोत्वादिष्विति॥ अयमर्थः—गोत्वादिषु भेदाभेदयोरेकशब्दावगम्यत्वं यथा न विरुध्यते तथेहापि सिद्धसाध्यत्वयोरित्यर्थः। शब्दभेदेनापीह विरोधस्सुपरिहर इत्याह—भिन्नप्रकृतिप्रत्ययोपादानत्वादिति॥ पच्यादिकया प्रकृत्या साध्यतोपादीयते, प्रत्ययेन तु घञादिना सिद्धता। अतः शब्दभेदान्न विरोध इत्यर्थः। उक्तञ्चेदमभियुक्तैः—

'साध्यत्वेन क्रिया तत्र धातुरूपनिबन्धना।
सिद्धभावस्तु यस्तस्याः स घञादिनिबन्धनः॥' इति॥

दृष्टञ्च गोत्वाश्वत्वादिशब्देषु प्रकृतिप्रत्ययभेदेन भेदाभेदाभिधानम्। तत्र हि प्रकृतिभूतेन गवादिशब्देनाभेद उपादीयते, गौः शाबलेय इति व्यक्तिसामानाधिकरण्यदर्शनात्। त्वतलादिना तु प्रत्ययेन गोत्वादेः सामान्यस्य शाबलेयादिव्यक्तिभ्यो भेद उपादीयते, शाबलेयस्य गोत्वमिति वैयधिकरण्यदर्शनादिति। एवं [६]प्रतीतिभेदनिदर्शनयोरन्यथासिद्धत्वान्नार्थभेदसिद्धिरित्युक्तम्। इदानीं तथा अभ्युगमेऽप्यनिष्टमापद्यत इत्याह—भाव्यरूपप्रतीतिनिदर्शनाभ्यां च धात्वर्थस्य तिङन्तेषु भावनामिच्छतो धात्वर्थस्य कर्मत्वप्रसङ्गः, करणत्वं

---

१. साध्यभावरूप—ग, ङ; साध्यरूप्यप्रतीति—घ.
२. 'च' नास्ति—क, ख.
३. 'तिङन्तेषु' नास्ति—ङ.
४. दर्शयन्नन्तरेणापि.
५. 'इति' नास्ति—छ.
६. प्रतीतिः—छ.

**धात्वर्थस्य [1]कर्मत्वप्रसङ्गः, [2]करणत्वं न स्यात् । तस्माद्धात्वर्थ एव व्यापारात्मा [3]स्वशब्दोपादानः [4]फलभवनसमर्थो भावना क्रिया [5]चेति साम्प्रतम् ॥**

**तदेतदसमञ्जसम्[6]—**

**[7]दृश्यमाने वस्तुभेदे नेष्टा शब्दार्थमात्रता ।**
**प्रत्ययार्थेनाभिभवः सिद्धे तद्भावनिश्चये[8] ॥ ३२ ॥**

---

न स्यात् इति ॥ अयमर्थः—धात्वर्थस्य साध्यताप्रतीत्या अर्थभेदनिदर्शनेन च प्रत्ययाभिधेयां भावनामिच्छतां भावनायां कर्मत्वं धात्वर्थस्यानिष्टं प्रसज्यते, करणत्वं चाभिप्रेतं हीयते, कर्मत्वेन प्रतीतिभेदार्थभेदनिदर्शनयोरभ्युपगमात् इति । उपसंहरति—तस्माद्धात्वर्थ एव व्यापारात्मा स्वशब्दोपादानः फलभवनसमर्थो भावना क्रिया चेति साम्प्रतमिति ॥ तस्मात् उक्तेन न्यायेन धात्वर्थ एव भावना ; क्रियापि धात्वर्थ एव, न ततोऽर्थान्तरम् ; स एव तु फलभवनसमर्थतयोपादानाद्भावनेत्युच्यते, व्यापारात्मनोपादानात्तु क्रियेति (इति) सर्वमुपपन्नम् ॥

तदेतत्सिद्धान्तवादी दूषयति—तदेतदसमञ्जसम् ;

[9]दृश्यमाने वस्तुभेदे नेष्टा शब्दार्थमात्रता ।
प्रत्ययार्थेनाभिभवः सिद्धे तद्भावनिश्चयः(ये) ॥ इति ॥

---

१. कर्मता—ख.
२. करणत्वं तु न स्यात्—क, ख ; न करणत्वं स्यात्—ग, ङ.
३. धातुशब्दो—ख, ग, घ, ङ.
४. फलभावना—क, ख.
५. 'च' नास्ति—क, ख.
६. 'असमञ्जसम्' तथाहि—क, ख, ग, घ, ङ.
७. विद्यमाने—क, ख.
८. निर्णये—क ; निर्णयः—ख, ग, ङ.
९. दृश्यमाने वस्तुभेदे इति—च.

**[1]दर्शयिष्यते ह्यव्यापारात्मनो धात्वर्थाद्भेदवती क्रिया। अतो न शब्दसामर्थ्यविलसितमेवैतदिति युक्तम्[2]। [3]असति वस्तुनि तथा**

---

अयमर्थः—यदुक्तं पूर्वपक्षवादिना शब्दोपकल्पित एवार्थभेदो न वास्तव इति, तदयुक्तम्। वस्तुभेदे दृश्यमाने शब्दार्थत्वमात्रस्य बाह्यवस्तुशून्यस्यानिष्टत्वात्। दृश्यते च धात्वर्थात्प्रत्ययार्थस्य भेदः प्रतीतिभेदनिदर्शनाभ्यामिति। यच्च सिद्धान्तवादिना अनवस्था-परिहाराय स्वयं व्यापाररूपत्वाद्भावनायाः साध्यताप्रतीतौ न व्यापारान्तरापेक्षेत्युक्ते पूर्वपक्षवादिना तत्साम्यं धात्वर्थस्यापादयतोक्तम्—घञाद्यन्तेषु धात्वर्थसाध्यत्वस्याप्रतीतिः प्रत्ययार्थेन सिद्धभावेनाभिभवादुपपद्यत इति, तदप्यनुपपन्नम्। सिद्धे हि धात्वर्थस्य साध्य-स्वभावे प्रत्ययार्थेन सिद्धभावेनाभिभवाभिधानं युक्तम्[4]। न च तत्सिद्धौ प्रमाणमस्तीत्यभि-प्रायः। एतद्विवृणोति—दर्शयिष्यते ह्यव्यापारात्मनो धात्वर्थाद्भेदवती क्रिया। अतो न शब्दसामर्थ्यविलसितमेवैतदिति युक्तमिति ॥

अयमभिप्रायः—कर्तृकर्मसमवेतसंयोगविभागात्मकगुणविशेषादव्यापारात्मनो धात्व-र्थाद्भिन्ना परिस्पन्दादिशब्दवाच्या क्रिया प्रतिपादयिष्यते—

'धातूनामभिधानीयान्कर्तृकर्मसमाश्रयान्।
लब्धात्मनोऽक्रियारूपान्विशेषान्प्रतिजानते ॥'

'उदासीनत्वविच्छेदलक्ष्यं धात्वर्थकारणम्।
स्पन्दव्यापारपर्यायं करोत्यर्थं प्रचक्षते ॥' इत्यत्र।

---

१. दर्शयिष्यते व्यापारात्मनो धात्वर्थाद्भेदवतीति, अतो—**क**; दर्शयिष्यते व्यापारात्मनो धात्वर्थात्मभेदवदिति क्रिया—**ख**;

२. विलसितमेवेदं युक्तम्—**क, ख**; विलसितमिति युक्तम्—**ग, ङ**.

३. असन्निहितवस्तुनि—**ख**.

४. 'युक्तम्' नास्ति—**च**.

नाम भवेत्। सम्बन्धग्रहणापेक्षत्वाच्च [1]शब्दस्य न [2]वस्तुस्वरूपक्लृप्त्यै विभवः। [3]निश्चिते च धातुभिः [4]भाव्यताया इहोपादाने अभिभवाभिधानं युक्तम्। [5]न च तथा, प्रमाणाभावात्, साधन-

---

अनेन (अतो न) शब्दसामर्थ्यविलसितमेवेदम्—तिङन्तेष्वर्थभेदप्रदर्शनं (इति) युक्तमिति॥ भवेदपि कदाचिदसति वस्तुनि शशशृङ्गादौ[6] शब्दसामर्थ्यविलसितत्वकल्पना। नेह वस्तुनोऽभावः सिद्ध इत्येतदाह—असति वस्तुनि तथा नाम [7]भवेदिति॥ नचैतदभ्युपगमक्षमम्, क्वचिदपि वस्तुरूपपरिकल्पनायां शब्दस्य सामर्थ्याभावादित्येतदाह—सम्बन्धग्रहणापेक्षत्वाच्च शब्दस्य न वस्तुस्वरूपक्लृप्त्यै विभव इति॥ सम्बन्धग्रहणापेक्षया हि शब्दः कार्यं जनयति, [8]न सत्तामात्रेण[9], तच्च शब्दस्य ज्ञापकत्वेऽवकल्पते, न कारकत्वे। न हि बीजादीनामङ्कुरादिकारकाणां सम्बन्धग्रहणापेक्षा दृश्यते। अतोऽर्थस्य ज्ञापक एव शब्दः, न तन्निर्माणप्रभुरित्यभिप्रायः। खपुष्पादिष्वपि बहिस्सन्त एवार्थाश्शब्दैरभिधीयन्ते, वाक्यार्थात्मना असतामपि तेषां पदार्थात्मना कथञ्चिच्छब्दाद्बुद्धेश्च भेदेन सद्भावोपपत्तेरिति॥

एवं श्लोकस्य पूर्वार्धं व्याख्यायाधुना परार्धं व्याचष्टे—निश्चिते च धातुभिर्भाव्यताया इहोपादानेऽभिभवाभिधानं युक्तम्। न च तथा, प्रमाणाभावादिति॥ अयमर्थः—साध्यस्वभावेऽपि धात्वर्थे घञादिप्रत्ययाभिहितेन सिद्धभावेनाभिभवात्साध्यताया अप्रतीतिर्युक्तेति यदुक्तम्, तदनुपपन्नम्। धातुभिः साध्यताया उपादाने निश्चिते एतदेवं स्यात्। नच तन्निश्चितम्, प्रमा-

---

१. 'शब्दस्य' नास्ति—क, ख.
२. वस्तुरूप—क, ख; वस्तुरूपक्लप्तौ—ग, ङ; वस्तुक्लृप्त्यै—घ.
३. निश्चिते तु—ग, घ, निश्चितेभिर्भावना-हेयोपादाने सति भावाभिभवाभिधानम्—ङ.
४. भाव्यतयोपादाने—क, ख; भाव्यतये-होपादाने—ग, घ, ङ.
५. न चेह तथा—ग, घ.
६. शृङ्गारादौ—छ.
७. भवेदपीति—छ.
८. 'न' नास्ति—च.
९. वार्तामात्रेण—छ.

**सम्बन्धस्य[1] गम्यमानभावनाविषयत्वात्, [2]तथापि निदर्शनात् 'शङ्कुलया खण्डः' इति ।**

**[3]विक्लिद्यन्ति पचन्तीति न विशेषः [4]प्रकल्पते ।**
**ऋते व्यापारनानात्वात्कर्तृभेदोऽपि वै कुतः ॥ ३३ ॥**

---

णाभावात् इति ॥ ननु घञन्तादिष्वपि कारकसम्बन्धो दृश्यते काष्ठैः पाक इति । स चैवमुपपद्यते यदि धातुः साध्यतामाचक्षीत, नान्यथा । नहि तत्र प्रत्ययवाच्या भावना अस्तीत्युक्तमित्याशङ्कयाह—साधनसम्बन्धस्य गम्यमानभावनाविषयत्वात्तथापि निदर्शनात् शङ्कुलया [5]खण्डः इ(ती)ति ॥ अयमभिप्रायः—यद्यपि पाकः इत्यादौ नाभिधीयते भावना, तदभिधायकशब्दाभावात्, तथाप्यर्थाद्गम्यते, पाकस्य तदविनाभावात् । गम्यमानभावनाविषयत्वेनापि कारकसम्बन्ध उपपद्यते । यथा 'शङ्कुलया खण्डः' इत्यत्र शङ्कुलया कृतः खण्डः इति गम्यमानकरोत्यर्थविषयः शङ्कुलायाः करणभावः, तथेहापि स्यादिति ।

तदेवं भेदप्रतीतिनिदर्शनयोरन्यथानुपपत्त्या धात्वर्थातिरिक्ता भावना अस्तीति साधितम् । इदानीं एतदेव परपक्षेऽनिष्टप्रसङ्गापादनद्वारेण दर्शयति—

[6]विक्लिद्यन्ति पचन्तीति न विशेषः प्रकल्पते ।
ऋते व्यापारनानात्वात्कर्तृभेदोऽपि वै कुतः ॥ इति ॥

अयमर्थः—यद्येक एवार्थः साध्यतया धातुनोपादीयेत, [7]न च परं व्यापारं प्रत्यय आचक्षीत, तदा (वि)क्लिदिपचिभ्यां विक्लित्तेरेवोपादानादर्थान्तरस्य चाभावात् विक्लिद्यन्ति

---

१. संबन्धस्य च—ख.
२. तथा दर्शनात्—ग, घ, ङ.
३. किञ्च–विक्लिद्यन्ति—ख, ग, घ, ङ.
४. प्रकल्प्यते—ग, घ, ङ.
५. 'न' अधिकं वर्तते—छ.
६. विक्लिद्यन्तीति—च.
७. नचापरं—छ.

**न तावत्तिङन्तेषु धात्वर्थ एव व्यापारात्मोपादीयते, विक्लिद्यन्ति पचन्तीति [1]धात्वर्थाभेदात्प्रत्ययाभेदप्रसङ्गात्। कर्तृभेदान्नैवमिति चेत्—न, व्यापारभेदमन्तरेण तदनुपपत्तेः[2]। यथा साधनानां नियोक्तृत्वे कर्तृलक्षणे यज्ञदत्तादय एव [3]कर्तारो न तण्डुलाः, अभिधीयमानव्यापारत्वे तु तण्डुला एव[4]। अनेन भिनत्ति, [5]दलति,**

---

पचन्तीति प्रतीतिविशेषो न स्यात्। (वि)क्लिदौ तण्डुलाः कर्तारः, पचौ तु देवदत्तादयः कर्तारः इति प्रतीतिभेदो भविष्यतीति चेन्न। धात्वर्थव्यतिरिक्तेन(क्तात्) विना कर्तृभेदस्यानुपपत्तेरिति श्लोकस्यार्थः। अस्यैव प्रपञ्चः—न तावत्तिङन्तेषु धात्वर्थ एव व्यापारात्मोपादीयते विक्लिद्यन्ति पचन्तीति धात्वर्थाभेदात्प्रत्ययाभेदप्रसङ्गादिति। अनेन श्लोकपूर्वार्धस्यार्थः प्रपञ्चितः। नात्र तिरोहितमिव किञ्चिदस्ति। उत्तरार्धव्यावर्त्यामाशङ्कां दर्शयति—कर्तृभेदान्नैवमिति चेदिति॥ अयमर्थः—कर्तृभेदात्क्रियाभेदः, ततश्च विक्लिदिपच्योरर्थभेदः। तथा हि—पचन्तीत्यत्र देवदत्तादयः कर्तारः, विक्लिद्यन्तीत्यत्र तु तण्डुलाः। अतः कर्तृभेदाद्व्यापारभेदः ततश्च बुद्धिभेदोऽप्युपपद्यते इति। अत्रोत्तरमाह—न, व्यापारभेदमन्तरेण तदनुपपत्तेरिति॥ व्यापारभेदमन्तरेण तत्र कर्तृभेदस्यानुपपत्तेर्न कर्तृभेदात्प्रत्ययभेद उपपद्यत इति। एतदेव प्रपञ्चयति—यथा साधनानां नियोक्तृत्वे कर्तृलक्षणे यज्ञदत्तादय एव कर्तारो न तण्डुलाः। अभिधीयमानव्यापारत्वे तु तण्डुला एवेति॥ अयमर्थः—अत्र कर्तृभेदं वदता इदं वक्तव्यम्, किं साधनानां नियोक्तृत्वं कर्तृलक्षणम्? किं वा धातुना अभिहितव्यापारत्वम्? आद्ये कल्पे यज्ञदत्तादय एव कर्तारो न तण्डुलाः, तेषामचेतनत्वात् साधननियोगा-

---

१. धात्वर्थभेदात्—ख.
२. -पत्तेः। तथाहि साधननियोक्तृत्वे—क, ख; साधनानां नियोक्तृत्वे—ग, घ, ङ.
३. कर्तारो न अभिधीयमान—ख; कर्तारो न तण्डुलाः। अगुणतया धातुना अभिमान—ग, घ, ङ.
४. एव कर्तारः। एतेन—क, ग, घ, ङ; एव। एतेन—ख.
५. विदलति—ग, घ, ङ.

**छिनत्ति, द्विधाभवतीत्यादयो व्याख्याताः। तस्माद्धात्वर्थातिरिक्तो व्यापार उपेयः, यत्कृतोऽर्थभेदः कर्तृभेदश्च ॥**

**अपरः कल्पः—स्यान्मतं [1]कर्मसमवायिक्रियेष्वेव धात्वर्थातिरिक्तो व्यापारो[2] गम्यते। कर्तृस्थक्रियेषु कथम्[3]?। उच्यते—**

---

योगात्। द्वितीये तु कल्पे उभयत्रापि तण्डुला एव कर्तारः स्युः। (वि)क्लिदिना पचिना च विक्लित्तिलक्षणस्य तद्व्यापारस्याभिधानात्। विक्लिद्यन्ति पचन्तीत्यत्रोपदिष्टं बुद्धिभेदाभावप्रसङ्गं विषयान्तरेऽतिदिशति—अनेन भिनत्ति, दलति, छिनत्ति, द्विधाभवतीत्यादयो व्याख्याता इति॥ उपसंहरति—तस्माद्धात्वर्थातिरिक्तो व्यापार उपेयो यत्कृतोऽर्थभेदः कर्तृभेदश्चेति॥ तस्मादुक्तदोषपरिहाराय धात्वर्थव्यतिरिक्तो व्यापारोऽभ्युपगन्तव्यः, येनार्थभेदः कर्तृभेदश्च भवेत्। कथं पुनः व्यापारान्तराभ्युपगमेऽर्थभेदः कर्तृभेदश्च? उच्यते। यद्यपि क्लिदेः पचेश्च विक्लित्तिलक्षणोऽर्थः समानः तथापि विक्लिद्यन्तीत्यस्मिन्पदे विक्लित्तिपदार्थाव(द)धिकः[4]स्थाल्युदरपरिभ्रमणादिलक्षणः[5] तण्डुलसमवाय्यन्यो व्यापार उपादीयते। अतो विक्लित्तिवत्सोऽपि प्रतीयते। तण्डुलानां च कर्तृत्वं गम्यते। पचन्तीत्यत्र देवदत्तादिसमवाय्यधिश्रयणादिलक्षणो विक्लित्तिव्यतिरिक्तोऽन्योऽपि व्यापारो विक्लित्तिवदुपादीयते। देवदत्तादयश्च कर्तारः प्रतीयन्ते। एवं भिनत्ति, दलति, छिनत्ति, द्विधा भवतीत्यादि द्रष्टव्यम्। अतोऽर्थभेदकर्तृभेदावस्मत्पक्ष एवोपपद्येते॥

इदानीं 'ऋते व्यापारे' त्यादिश्लोकोत्तरार्धव्याख्यानान्तरं विकल्पेन दर्शयितुमाह—अपरः कल्प इति॥ अपरो व्याख्याप्रकारः प्रदर्श्यत इत्यर्थः। तत्र प्रथमं [6]तद्व्यावर्त्यामाशङ्कां दर्शयति—स्यान्मतं कर्मसमवायिक्रियेष्वेव धात्वर्थातिरिक्तो व्यापारो गम्यते,

---

१. कर्मसमवेत—**ख.**
२. व्यापारोऽभ्युप—**ग, घ, ङ.**
३. कथमिति—**क, ख, ग, घ, ङ.**
४. वधिकस्थाल्यु—**छ.**
५. लक्षणतण्डुल—**छ.**
६. तावद्व्यावर्त्या—**च.**

**ऋते व्यापारनानात्वात्कर्तृभेदोऽपि वै कुतः ? ।**

**'ऋत्विजो यजन्ति' 'यजते यजमानः' इत्यगुणतो धातुना [1]अभिधीयमानव्यापारस्य कर्तृत्वात् सङ्कल्पविशेषस्य [2]च यज्यभिधेयस्य यजमानव्यापारत्वात् 'यजन्ति याजकाः' इत्यनुपपत्तिः । धात्वर्थातिरिक्तव्यापारप्राधान्यविवक्षायां [3]तूपपद्यते । नन्वनभि-**

---

कर्तृस्थक्रियेषु कथमिति ॥ अयमर्थः—विक्लिद्यन्ति पचन्तीत्यादौ बुद्धिभेदलक्षणो (यो) हेतुः विक्लित्त्यादिधात्वर्थातिरिक्तव्यापारप्रसाधनायोपन्यस्तः, स न सार्वत्रिकः । ये कर्मसमवायिक्रियाः पचत्यादयः तेष्वेवानेन हेतुना धात्वर्थातिरिक्तो व्यापारो गम्यते । ये पुनः कर्तृस्थक्रियाः आस्ते, शेते, [4]यजतीत्येवमादयः तेषु कथं धात्वर्थातिरिक्तो व्यापारो गम्यते ? नहि तत्रायं हेतुर्विद्यत इति । एतन्निराकरणाय श्लोकोत्तरार्धमवतारयति—उच्यते—ऋते व्यापारनानात्वा[5]त्कर्तृभेदोऽपि वै कुतः इति ॥ यजत्यादौ व्यापारनानात्वादृते कर्तृभेदः ऋत्विग्यजमानभेदेन दृश्यमानो नोपपद्यत इति । अस्यार्थस्य स्पष्टीकरणायाह—ऋत्विजो यजन्ति, यजते यजमानः इत्यगुणतो धातुना [6]अभिधीयमानव्यापारस्य कर्तृत्वात्सङ्कल्पविशेषस्य च यज्यभिधेयस्य[7] यजमानव्यापारत्वात् यजन्ति याजका इत्यनुपपत्तिः । धात्वर्थातिरिक्तव्यापारप्राधान्यविवक्षायान्तूपपद्यत[8] इति ॥ अयमर्थः—'ऋत्विजो यजन्ति', 'यजते यजमानः' इत्यृत्विजां यजमानस्य च यजत्यर्थे कर्तृत्वं दृश्यते । तत्र धात्वर्थातिरिक्तव्यापारान्तरस्याभिधेयस्यानभ्युपगमे यजन्ति याजका इति नोपपद्यते । कुतः? अगुणतो धातुना अभिधीयमानव्यापारस्य कर्तृत्वात् । यस्य हि व्यापारो धातुना प्राधान्येनाभिधीयते स कर्तेति

---

१. विधीयमा(न)व्यापारस्याकर्तृ—ङ.
२. 'च' नास्ति—क, ख.
३. 'तु' नास्ति—ङ.
४. यजतीत्यादयः—छ.
५. नानात्वादिति—च.
६. अभिधेयस्य—छ.
७. 'च' अधिकं वर्तते—च, छ.
८. इत्यर्थः—च.

**धानेऽपि व्यापारभेदस्य[१] द्रव्यपरित्यागसङ्कल्पमात्रस्याभिधानेऽपि यजतिना स्वातन्त्र्यविवक्षाभेदात् कर्तृभेदः करणभेद इवातिशयविवक्षाभेदादुपपद्यते। किमिदं स्वातन्त्र्यम्? साधनानां [२]नियोक्तृ-**

---

कर्तृलक्षणम्। साधननियोगस्य [३]कर्तृलक्षणत्वे तण्डुलादीनामचेतनानां कर्तृत्वाभावप्रसङ्गात्। अत्र च द्रव्यत्यागसङ्कल्पो यज्यभिधेयो यजमानस्य व्यापारः नर्त्विजाम्[४]। अतः तेषां धातुना अभिधीयमानव्यापारस्य कर्तृलक्षणस्य (अ)भावात् 'यजन्ति याजकाः' इत्यनुपपत्तिः। यदा पुनः धात्वर्थातिरिक्तो व्यापारः तन्निर्वर्तन[५]समर्थः प्राधान्येन प्रतिपाद्यते तदोपपद्यते, यजमानगतसङ्कल्पविशेषनिर्वर्तन[६]समर्थस्य व्यापारस्य ऋत्विक्ष्वपि भावात् तत्र तेषां कर्तृत्वोपपत्तेरिति। [७]तत्र चोदयति—नन्वनभिधानेऽपि व्यापारभेदस्य द्रव्यपरित्यागसङ्कल्पमात्रस्याभिधानेऽपि यजतिना स्वातन्त्र्यविवक्षाभेदात् कर्तृभेदः करणभेद इवातिशयविवक्षाभेदादुपपद्यत इति॥ अयमर्थः—अनभिधानेऽपि व्यापारभेदस्य, द्रव्यपरित्यागसङ्कल्पमात्रस्याभिधानेऽपि यजतिना स्वातन्त्र्यविवक्षाभेदात्कर्तृभेद उपपद्यते। यदा यजमानस्य स्वातन्त्र्यं विवक्ष्यते तदा यजमानस्य कर्तृत्वम्, यदा तु ऋत्विजां स्वातन्त्र्यं विवक्ष्यते तदा तेषां कर्तृत्वम्, यथा साधकतमत्वविवक्षाभेदात्करणभेदः—[८]यदा हि छेदने परशोः साधकतमत्वं विवक्ष्यते तदा 'परशुना छिनत्ति' इति परशोः करणत्वं प्रतीयते। यदा तु हस्तस्य, तदा तस्य करणत्वम्, हस्तेन छिनत्तीति। एवमत्रापि धात्वर्थातिरिक्तव्यापारा(न)भिधानेऽपि धात्वर्थ एवैकस्मिन्स्वातन्त्र्यविवक्षाभेदादृत्विजां यजमानस्य च कर्तृत्वमुपपद्यत इति॥

एतन्निराकर्तुं स्वातन्त्र्यलक्षणं पृच्छति—किमिदं स्वातन्त्र्यमिति। अत्र परं(रः)

---

१. व्यापारभेदस्य स्वातन्त्र्यविवक्षाभेदात्कर्तृभेदः—**ग, घ, ङ.**

२. नियौजकत्वम्—**ङ.**

३. कर्तृलक्षणत्वेन—**च.**

४. नर्त्विजादतः—**च.**

५. समर्थ—**च.**

६. समर्थव्यापारस्य—**च.**

७. 'तत्र' नास्ति—**च.**

८. यथा हि—**च.**

**त्वम् । काष्ठादीनि पचन्तीति कथम् ? नियोज्यान्तराभावात् [1]नियोगविवक्षया प्रयोगो न स्यात् । तस्मात्प्राधान्येन प्रतिपाद्यमानव्यापारता स्वातन्त्र्यमित्यास्थेयम्[2] । तथा चोक्तम्—'[3]स्थालीस्थे यत्ने कथ्यमाने स्थाली स्वतन्त्रा' इति ॥**

---

परिहारमाह—साधनानां नियोक्तृत्वमिति ॥ कारकान्तरनियोक्तृत्वं स्वातन्त्र्यमित्यर्थः । एतत्स्वातन्त्र्यलक्षणं दूषयितुमाह—काष्ठादीनि पचन्तीति कथमिति ॥ काष्ठादीनि सर्वाणि कारकाणि पचन्तीति प्रयोगोऽस्मिन्पक्षे कथम् ? न कथञ्चिदप्युपपद्यत इत्यर्थः । का अत्रानुपपत्तिरिति चेत् तत्राह—नियोज्यान्तराभावान्नियोगविवक्षया प्रयोगो न स्यादिति ॥ अयमर्थः—काष्ठादीनीत्यादिशब्देन सर्वेषां कारकाणां नियोक्तृपक्षनिक्षेपात् नियोज्यान्तरस्याभावात् नियोज्याभावे च नियोक्तृत्वविवक्षानुपपत्तेः योऽयं सर्वेषां काष्ठादीनां नियोगविवक्षया प्रयोगः पचन्तीति कर्तृप्रत्ययान्तस्य शब्दस्य, स न स्यात् । तस्मान्नेदं स्वातन्त्र्यलक्षणं सम्भवति । किं पुनस्तदित्यपेक्षायामाह—तस्मात्प्राधान्येन प्रतिपाद्यमानव्यापारता [4]स्वातन्त्र्यमित्यास्थेयमिति ॥ एतदेव च स्वातन्त्र्यलक्षणं महाभाष्यकृताप्यङ्गीकृतमित्याह—तथा चोक्तम्—स्थालीस्थे यत्ने कथ्यमाने स्थाली स्वतन्त्रेति ॥ अत्र हि स्थालीगतस्य व्यापारस्य प्राधान्येन कथने सति स्थाल्याः स्वतन्त्रता भवतीत्यभिधानात्प्राधान्याभिहित(त)व्यापारत्वं स्वातन्त्र्यलक्षणमङ्गीकृतमिति गम्यते ।

नन्वस्मिन्नपि स्वातन्त्र्यलक्षणे काष्ठादीनि पचन्तीति प्रयोगानुपपत्तिः समाना, प्राधान्याभिहितव्यापारत्वस्यापि तत्राभावात् । अप्रधानापेक्षं हि प्रधानम् । न चेह कस्यचिदपि व्यापारोऽप्राधान्येनाभिधीयते, सर्वेषां काष्ठादिव्यापाराणां तुल्यवदभिधानात् । तस्मान्नेदमपि

---

१. नियोक्तृत्वविवक्षया—**क, ख** ; नियोक्तृत्वविवक्षाप्रयोज्ये—**ग, घ** ; नियोक्तृत्वविवक्षाप्रयोगो—**ङ**.

२. 'इत्यास्थेयम्' नास्ति—**ग, घ, ङ**.

३. स्थालीस्थे प्रयत्ने—**ग, घ** ; स्थालीस्थायत्नेन कथ्यमाने—**ङ**.

४. स्वातन्त्र्यमित्यस्त्वयमिति—**छ**.

**भवतु व्यापारभेदः, (स च) [१]धातूपादान एवास्तु । [२]तथा च [३]पचिना [४]देवदत्तादिव्यापारोपादानात् [५]विक्लिदिना चानुपादानात् '[६]विक्लिद्यन्ति' 'पचन्ति' इत्यर्थभेदकर्तृभेदौ । [७]यजिना च**

---

स्वातन्त्र्यं कर्तृलक्षणं सम्भवतीति । अत्रोच्यते । अगुणभावमात्रमिह प्राधान्यमुच्यते, तच्च काष्ठादि[८]व्यापारेष्वप्यस्तीति 'काष्ठादीनि पचन्ति' इति प्रयोगोपपत्तिरिति ॥

इदानीं प्रतिपादितं व्यापारभेदमभ्युपगम्य तस्य प्रत्ययाभिधेयतामसहमानः [९]परः प्रत्यवतिष्ठते—भवतु व्यापारभेदः, (स च) धातूपादान एवास्त्विति ॥ अत्रायमर्थः—भवतु व्यापारद्वयाभिधेयत्वं पच्यादौ; तच्च धात्वभिधेयमेवास्तु न प्रत्ययाभिधेयम्, प्रत्ययाभिधेयस्तु कर्ता कर्तृसङ्ख्या वेत्यभिप्रायः । अस्मिन्नपि पक्षे 'विक्लिद्यन्ति' 'पचन्ति' इत्यर्थभेदकर्तृभेदौ न विरुध्येते इत्याह—तथा च पचिना देवदत्तादिव्यापारोपादानाद्विक्लिदिना चानुपादानात् 'विक्लिद्यन्ति' 'पचन्ति' इत्यर्थभेदकर्तृभेदाविति ॥ अयमर्थः—योऽयं देवदत्ताद्याश्रितो व्यापारोऽधिश्रयणादिः सोऽपि पचिनोपादीयते, न तण्डुलाश्रितविक्लित्तिमात्रम् । (वि)क्लिदिना तु विक्लित्तिमात्रमेवाभिधीयते, न पुनर्देवदत्तव्यापारोऽधिश्रयणादिरपीत्यर्थभेदकर्तृभेदावुपपद्येते इति । भवत्ये(त्वे)वं कर्मस्थक्रियेषु पचत्यादिषु कर्तृभेदः। कर्तृस्थक्रियेषु तु यजत्यादिषु 'यजते यजमानः' 'यजन्ति याजकाः' इत्येवं प्रतीयमानः कर्तृभेदः कथमुपपद्यते । नहि तत्रैवंविधो भेदहेतुरस्तीत्याशङ्कापाकरणायाह—यजिना

---

१. धातूक्त एव सः—क, ख; धातूपादान एव तु सः—ग, घ, ङ.
२. तथा हि—ग, घ.
३. पचतिना—क, ख.
४. देवदत्तव्यापारो—क, ख, ग, घ, ङ.
५. 'विक्लिदिना चानुपादानात्' नास्ति—क; विक्लिदिना अनुपादानात्—ख; विक्लिचिना अनुपादानात्—ङ.
६. विक्लिद्यन्तीत्यर्थ—क, ख.
७. यजतिना—ग, घ, ङ.
८. व्यापारेष्वस्तीति—च.
९. परं—छ.

[1]ऋत्विजां व्यापारस्य [2]तादर्थ्यादभिधानादृत्विजां कर्तृत्वोपपत्तिः। [3]यथोक्तम्—'तदभिसन्धिपूर्वकं प्रेषणमध्येषणं वा [4]युक्तं तत्सर्वं [5]पच्यर्थः' इति ॥

[6]नैतत्सारम्—

---

चर्त्विजां व्यापारस्य तादर्थ्यादभिधानात् ऋत्विजां कर्तृत्वोपपत्तिरिति। यजमानगतसङ्कल्पविशेषवाचिना यजिना ऋत्विग्व्यापारस्यापि तादर्थ्यात्तन्निर्वर्तनार्थत्वात् अभिधानम्, ततश्चाभिधीयमानव्यापारत्वादृत्विजां कर्तृत्वोपपत्तिः। यजमानव्यापारवचनतया प्रसिद्धेन यजिना तद्व्यतिरिक्तस्यर्त्विग्व्यापारस्यापि [7]तादर्थ्यादभिधानं सम्भवति इत्येतद्भाष्यग्रन्थोदाहरणेन द्रढयति—यथोक्तम्—तदभिसन्धिपूर्वकं प्रेषणमध्येषणं वा, युक्तं तत्सर्वं पच्यर्थ इति—(इति)॥ अस्यायमर्थः—तदभिसन्धिपूर्वकं पाकाभिसन्धिपूर्वकं यत्प्रेषणादि[8] क्रियते, तत्सर्वं पाकार्थत्वात्पच्यर्थ इति युक्तमिति। तत्र 'हेतुमति च' इति सूत्रस्यार्थविचारावसर (रे प्रेषणादेरपि धात्वर्थत्वसंभव) प्रदर्शनायेदमुक्तम्। एवं हि तत्र विचारः कृतः—हेतुमति चेति सूत्रस्य कोऽर्थः? किं हेतुमति वर्तमानाद्धातोः णिजिति, किं वा हेतुमत्यभिधेये णिजिति। तत्र धातोरेव हेतुमति वर्तमानत्वं भवतीति प्रतिपादनेन [9]विचारार्हत्वमस्यार्थस्य प्रदर्शयितुं पाकव्यतिरिक्तस्य तदभिसन्धिपूर्वकस्य प्रेषणादेरपि पच्यर्थत्वमुक्तम्। अतो यजिना यजमानव्यापारवाचिना तादर्थ्यादृत्विग्व्यापाराभिधानसम्भवादृत्विजां [10]यजत्यर्थे कर्तृत्वोपपत्तिरिति साधूक्तम्। ततश्च धात्वर्थातिरिक्तप्रत्ययाभिधेयो व्यापारो नास्तीति स्थितम्।

एतन्निराकरोति—(नैतत्सारम्)—

---

१. ऋत्विग्व्यापारस्य—क, ख, ग, घ, ङ.
२. तादर्थ्याभिधानात्—क, ख; तादर्थ्येना-
३. तथा चोक्तम्—ख, ग, घ.
४. यत्तत्सर्वं—क, ख, ग, घ, ङ.
५. पचत्यर्थः—ख.
६. तत्र—क, ख.
७. सामर्थ्यादभि—छ.
८. प्रेषणं—च.
९. विचार्यत्वमस्य—छ.
१०. 'यजत्यर्थे'—नास्ति—च.

**विक्लित्तिमात्रसङ्कल्पविशेषैकावलम्बनौ ।**
**[१]ज्ञायमानतदर्थत्वा[२]न्नेष्टावन्याभिधायिनौ ॥ ३४ ॥**

**[३]'पाकः' 'यागः' इति [४]विक्लित्तिमात्रं सङ्कल्पमात्रं चाचक्षाते [५]पचियजी, न [६]तदतिरिक्तं कर्तृव्यापारम्, पाकस्य [७]क्रिये-**

---

[८]विक्लित्तिमात्रसङ्कल्पविशेषैकावलम्बनौ ।
ज्ञायमानतदर्थत्वान्नेष्टावन्याभिधायिनौ ॥ (इति) ॥

विक्लित्तिमात्रं सङ्कल्पविशेष[९]श्चैकोऽवलम्बनं ययोस्तावेतौ विक्लित्तिमात्रसङ्कल्पविशेषैकावलम्बनौ पचियजी। विक्लित्तिमात्रमिति मात्रशब्देन विक्लित्तिव्यतिरिक्तस्य देवदत्ताद्याश्रितस्याधिश्रयणादेः पचिवाच्यत्वं व्यावर्तितम्। सङ्कल्पविशेषैकेत्यत्रैकशब्देन तद्व्यतिरिक्तस्यर्त्विग्व्यापारस्य यजिवाच्यत्वं व्यावर्तितम्। कथं पुनरन्य(न)योरेतावन्मात्रार्थत्वमवधारितम्? घञन्तयोस्तथात्वावधारणात्। ननु घञन्तयोस्तावन्मात्रार्थत्वेऽपि तिङन्तयोरर्थान्तरवचनत्वं कस्मान्नेष्यते? यथा अक्षादिशब्दानां क्वचित्प्रयोगेऽवगतादर्थादर्थान्तरवचनत्वं प्रयोगान्तरे गृह्यते तद्वदित्याशङ्कापाकरणायोक्तम्—ज्ञायमानतदर्थत्वादिति ॥ स एवार्थस्तदर्थः स ज्ञायमानः प्रत्यभिज्ञायमानः घञन्ततिङन्तयोः प्रयोगयोः पचियज्योर्दृश्यते। अतो नान्यार्थवाचिनाविष्टाविति श्लोकस्यार्थः। अस्यैव स्पष्टीकरणायाह—'पाकः', 'यागः' इति विक्लित्तिमात्रं सङ्कल्पमात्रं चाचक्षाते पचियजी, न तदतिरिक्तं कर्तृव्यापारम्, पाकस्य क्रियेत्यनिदर्शनात् इति ॥ अयमर्थः—'पाकः' इत्यत्र तावत्प्रयोगे (पचिः) विक्लित्तिमात्रमाचष्टे,

---

१. यजमानतदर्थत्वात्—**क, ख.**
२. नैष्टापत्त्यभिधायिनौ—**क.**
३. भावाभिधायिनौ पाको याग इति—**ग, घ, ङ.**
४. विक्लितिमात्रं चाचक्षाते—**ख**; विक्लित्तिसंकल्पमात्रवादिनीति—**ङ.**
५. पचतियजती—**ग, घ.**
६. तदतिरिक्तौ कर्तृव्यापारौ—**ख, ग, घ, ङ**
७. क्रिया सिद्धेत्यनिदर्शनात्—**ग, ङ**; क्रियासिद्धेत्यनित्यदर्शनात्—**घ.**
८. विक्लित्तीति—**च.**
९. श्चैकावलंबनं—**छ.**

न तद्व्यतिरिक्तमधिश्रयणादिकं कर्तृव्यापारम्; 'यागः' इत्यस्मिन्प्रयोगे यजिरपि यजमानगतं द्रव्यत्यागसङ्कल्पमात्रम्, न तद्व्यतिरिक्तमृत्विग्व्यापारम्। कथं गम्यते? पाकस्य क्रियेत्यर्थभेदनिदर्शनाभावात्। यथा 'पचति' इत्यस्य पाकं करोतीति भेदेनार्थो निदर्श्यते न तथेह निदर्श्यते, किन्तु एक एव विक्लित्तिरिति। अतस्तत्र विक्लित्तिमात्रमर्थ इति ॥

का पुनरियं विक्लित्तिर्नाम? यत्र पाकशब्दो वर्तते। उच्यते। उदकसंसक्ताग्न्यवयवाभिघातेन तण्डुलेषु कर्मोत्पद्यते; ततश्च तदवयवेषु विभागलक्षणो गुणविशेष उत्पद्यते; पुनश्च तेनैव हेतुना प्रशिथिलसंयोगलक्षणो गुण उत्पद्यते; स विक्लित्तिशब्देनोच्यते पाकशब्देन च। तस्य चौदनं प्रति प्रत्यासन्नत्वात्करणत्वमुपपद्यते [1]कर्मफलत्वाच्च तस्य तद्द्वारेण काष्ठादिभिः कारकैः सम्बन्धः इति ॥

अन्ये तु मन्यन्ते—तण्डुलावयवगतं [2]कर्मैव विक्लेदनमिति, साक्षात्कारकसम्बन्धोपपत्तेः। तस्य चौदनं प्रति करणत्वं संयोगविभागद्वारेण समर्थयन्ति।

ननु विक्लित्तिरेव चेत्पाकशब्दस्यार्थः कथं तदभावे प्रयोगः? दृश्यते चेष्टकाः पचन्तीति। न चेष्टकासु विक्लेदनमस्ति। तस्मादेक एव पाकशब्दस्यार्थो ग्राह्यः। उच्यते—पच्यमानद्रव्यावयवसंयोगविभागौ पचिर्न व्यभिचरति, इष्टकादिष्वपि तयोर्भावात्। विक्लित्तिस्तु पच्यर्थविशेषः। न सर्वः पच्यर्थो विक्लित्तिरेव। नहि यत्र पचिः प्रयुज्यते तत्र सर्वत्र विक्लिदिः प्रयुज्यते, किन्तु संयोगविभागविशेष एव तण्डुलाद्यवयवसमवायिनि प्रयुज्यते 'विक्लिद्यन्ति तण्डुलाः' इति, न पुनः 'इष्टका विक्लिद्यन्ति' इत्यादिप्रयोगो दृश्यते। अत्र पचेः विक्लित्तिमात्रार्थत्वाभिधानं विशेषाभिप्रायं द्रष्टव्यम्।

अपरे तु सन्तापनं पच्यर्थमाहुः। किं पुनः सन्तापनं नाम? अग्निना तण्डुलादीनां संयोगः। अस्मिन्नपि पक्षे, विक्लित्तिरपि तद्विशेष एव। सर्वथापि तण्डुलादिकर्मकारक-

१. कर्मत्वाच्च—छ.    २. तमेव विक्लेदं इति—च.

**त्यनिदर्शनात् ।**

**तथा 'पच्यन्ते तण्डुलाः स्वयमेव' 'यजते यजमानः' इति,**

---

समवायी पचेरर्थः[१], न देवदत्तादिसमवाय्यधिश्रयणादिः । कथं पुनस्तण्डुलादिसमवायिनि पच्यर्थे देवदत्तस्य कर्तृत्वम् 'पचति देवदत्तः' (इति)? इति चेत्—उच्यते । असमवेतस्यापि देवदत्ते पचत्यर्थस्य तदधीनात्मलाभवत्त्वात्[२] तत्कर्तृ(क)त्वं न विरुध्यते । कथं पुनरक्रियात्मके पच्यर्थेऽभ्युपगम्यमाने तस्य कारकसम्बन्ध इति चेत्—अस्योत्तरं 'परोपाधिक्रियारूपः' इत्यत्र वक्ष्यते । अतः पाकयोगशब्दयोः विक्लित्तिमात्रं सङ्कल्पमात्रं चार्थः नान्यः कर्तृव्यापार इत्यनवद्यम् ।

ननु घञन्तस्य पच्यादेः विक्लित्तिमात्राद्यर्थत्वेऽपि आख्यातसम्बन्धिनस्तस्य विक्लित्त्यादिव्यतिरिक्तः कर्तृव्यापारोऽप्यर्थ एव । तथा पचतीत्युक्ते न विक्लित्तिमात्रं प्रतीयते, किन्तु तद्व्यतिरिक्तः कर्तृव्यापारोऽधिश्रयणादिः । ततः सोऽपि तदर्थ एव भवितुमर्हतीति यत्कैश्चिदुच्यते, तन्निराकरणायाह—तथा 'पच्यन्ते तण्डुलाः स्वयमेव', 'यजते यजमानः' इति [३]तन्मात्रस्यैव तद्व्यापारत्वाभ्युपगमादिति । अयमर्थः—'पच्यन्ते तण्डुलाः स्वयमेव' इति कर्मकर्तृविषयोऽयं (यः) पचिः, यश्च 'यजते यजमानः' इति यजमानकर्तृविषयो यजिः, तावाख्यातप्रत्ययान्तावपि विक्लित्तिमात्रं सङ्कल्पमात्रं चाचक्षाते इत्यभ्युपगन्तव्यम् । तत्र हेत्वपेक्षायामुक्तम्—तन्मात्रस्यैव तद्व्यापारत्वाभ्युपगमादिति ।। तन्मात्रस्य विक्लित्तिमात्रस्य सङ्कल्पमात्रस्य च, तद्व्यापारत्वाभ्युपगमात् कर्तृव्यापारत्वाभ्युपगमात् । नहि तत्र तद्व्यतिरिक्तः कर्तृव्यापारोऽभिधेयोऽभ्युपेयते भवता । अस्माभिस्तु तत्रापि विक्लित्त्यादिधात्वर्थैकार्थसमवाय्यन्यः कर्तृव्यापारः प्रत्ययाभिधेयः उपेयत एव । तस्मात्पचियज्योर्घञन्तयोः

---

१. पचेरर्थो हि देव—**च.**

२. लाभत्वात्—**छ.**

३. 'तन्मात्रस्यैव' इत्यारभ्य 'यश्च यजते यजमानः इति' पर्यन्तो ग्रन्थः नास्ति च-मातृकायाम् ।

**तन्मात्रस्यैव [1]तद्व्यापारत्वाभ्युपगमात्। तथा च 'पचति देवदत्तः', 'यजन्ति याजकाः' इति प्रज्ञायमान[2]तदर्थस्य नार्थान्तरविषयत्वं युक्तम्।**

**[3]अव्यभिचाराद्धि [4]तावन्मात्रमर्थः, नाधिकम्, व्यभिचारात्, शब्दान्तरनिबन्धनत्वाच्च, [5]प्रत्ययागमे हि प्रतीयमानः तदर्थ[6] एव**

---

आख्यातप्रत्ययान्तयोरपि कर्मकर्तृ[विषययो]र्यजमानकर्तृविषययोः[7] विक्लित्तिमात्रसङ्कल्प[8]विशेषैकालम्बनत्वस्याभ्युपेयत्वान्नार्थान्तरवचनत्वमन्यत्रापि युक्तमिति। एतद्दर्शयति—तथा च पचति देवदत्तो यजन्ति याजकाः इति प्रज्ञायमानतदर्थस्य नार्थान्तरविषयत्वं युक्तमिति। अत्र प्रज्ञायमानतदर्थत्वं हेतुत्वेनोक्तम्। पाको यागः, पच्यन्ते स्वयमेव तण्डुलाः, यजतेयजमानः इत्यत्र यावर्थौ पचियज्योः समधिगतौ विक्लित्तिमात्रसङ्कल्पमात्रलक्षणौ, तावेव प्रज्ञायेते 'पचति देवदत्तः' 'यजन्ति याजकाः' इत्यत्रापि। अतस्तादर्थ्यमेव युक्तमिति ॥

ननु तादर्थ्यं भवतु, तावन्मात्र(त्रार्थत्व)न्तु कस्मात्? अधिकार्थत्वेऽपि [9]तादर्थ्याविरोधादित्याशङ्क्याह—अव्यभिचाराद्धि तावन्मात्रमर्थो नाधिकम्, व्यभिचारादिति॥ पचियज्योर्विक्लित्तिसङ्कल्पमात्रमेवार्थः, अव्यभिचारात्। नाधिकमधिश्रयणादिकं कर्तृव्यापाररूपम्; व्यभिचारात्। यो हि शब्दो यमर्थं न व्यभिचरति स तदर्थो ग्राह्यः। यश्च यं व्यभिचरति न स तदर्थो ग्रहणमर्हति॥ इतोऽपि न विक्लित्त्यादिव्यतिरिक्तः कर्तृव्यापारो धातोरर्थः इत्याह—शब्दान्तरनिबन्धनत्वाच्च, प्रत्ययागमे हि प्रतीयमानः तदर्थ एव कर्तृव्यापार इति॥ धातोः शब्दान्तरं प्रत्ययः स एव [10]निबन्धनः कर्तृव्यापार[:] प्रत्ययस्य यतः, अतोऽपि नासौ धातोरर्थः। शब्दान्तरनिबन्धनत्वं कर्तृव्यापार(प्रत्यय)स्य कुतो ज्ञायत इत्यपेक्षायामुक्तम्—

---

१. तद्व्यापाराभ्युपगमात्—**ख.**
२. तदर्थस्यानर्थान्तर—**क, घ**; तदर्थस्यार्थान्तर—**ख.**
३. अव्यभिचारादेतन्मात्रमेव—**ङ.**
४. तन्मात्रमेव तदर्थो—**ख, ग, घ.**
५. प्रत्ययावगमेऽपि—**क, ख.**
६. -मानतदर्थ—**ङ.**
७. कर्तृत्वविषययोः—**च.**
८. विशेषैकावलम्बनत्वस्य—**छ.**
९. तादर्थ्यविरोधात्—**च.**
१०. निबन्धनं कर्तृव्यापारं—**छ.**

**कर्तृव्यापारः। [1]प्रधानानाञ्च प्रायेण प्रत्ययार्थत्वात्प्राधान्यादपि प्रत्ययार्थत्वम् ।**

---

प्रत्ययागमे हीत्यादि । यदा ह्याख्यातप्रत्ययः प्रयुज्यते तदा [2]कर्तृव्यापारः प्रतीयते, नान्यत्(दा)। अतोऽन्वयव्यतिरेकाभ्यां स तदर्थ एव भवितुमर्हतीत्यर्थः । इतोऽपि प्रत्ययार्थः कर्तृव्यापार इत्याह—प्रधानानां च प्रायेण प्रत्ययार्थत्वात्प्राधान्यादपि प्रत्ययार्थत्वमिति ॥ अयमर्थः— आख्यातप्रत्ययान्ते पदे कर्तृव्यापारः प्राधान्येन प्रतीयते, न पाचकादिष्विवोपसर्जनतया । प्राधान्याच्च प्रत्ययार्थत्वमवगम्यते, प्रधानानां प्रायेण प्रत्ययार्थत्वदर्शनात् । यथा पाचकशब्दात्कर्तुः[3] प्राधान्यं प्रतीयते, यथा चौपगवशब्दादपत्यस्य । प्रायेणेत्यनेनै[4]तद्दर्शयति— बाहुल्येन प्रत्ययार्थस्य प्राधान्यं दृश्यते, न पुनः सर्वत्र । क्वचित्तु प्रकृत्यर्थस्य प्राधान्यं प्रत्ययार्थस्य गुणभावो दृश्यते—यथा शुक्लतरः शुक्लतम इति ॥

नन्वेवन्तर्हि अनैकान्तिकं प्राधान्यं कथं कर्तृव्यापारस्य प्रत्ययार्थत्वनिश्चयहेतुत्वेनोच्यते? नैष दोषः । सम्भावनामात्रहेतुताभिप्रायेणास्योक्तत्वात् । आख्यातप्रत्ययस्यापि भावनां प्रति व्यभिचाराद्धातोरिव तदभिधायकत्वमनुपपन्नमिति शङ्कते—अस्त्यादिषु व्यभिचार इति चेदिति॥ अस्ति भवतीत्यादिषु प्रत्ययस्य भावनां प्रति व्यभिचारः । नहि तत्र भावना सम्भवति, भाव्याभावात् । न च भाव्यानपेक्षिणी भावना सम्भवति । [5]नाप्यस्त्यर्थस्य कर्तैव भाव्य इत्युपपद्यते, कर्तृकर्मणोर्भेदप्रसिद्धेः । अतो व्यभिचारान्न प्रत्ययस्य भावनार्थत्वं सम्भ-

---

१. यथोक्तम्—
'तथा क्रमवतोर्नित्यं प्रकृतिप्रत्ययांशयोः ।
प्रत्ययश्रुतिवेलायां भावनात्मा प्रतीयते ॥'
—अयं ग्रन्थः 'कर्तृव्यापारः' 'प्रधानानां च प्रायेण' इत्यनयोर्मध्ये दृश्यते—**ग**, घ, ङ; मातृकासु. भट्टोम्बेकटीकायां अस्यग्रन्थस्यावतारिका एवं दृश्यते—'अत्र वृद्धानुमतिं दर्शयति—यथोक्तमिति।'

२. तदा पूर्वापरः प्रतीयते—**च.**

३. प्राधान्यात्—**छ.**

४. 'एतत्' नास्ति—**छ.**

५. न चास्त्यर्थस्य—**छ.**

**अस्त्यादिषु व्यभिचार इति चेत्—न, [1]वस्तुतोऽ[2]भावेऽपि शब्दात्प्रतीतेः। अन्यथा [3]अस्ति [4]भावः सत्तेत्यभेदात्।**

---

वतीति। एवमाशङ्कां दर्शयित्वा निराकरोति—न, वस्तुतोऽभावेऽपि शब्दात्प्रतीतेः, अन्यथा अस्ति भावः सत्तेत्यभेदादिति॥ नेति प्रदर्शितां प्रत्ययस्य भावनाव्यभिचाराशङ्कां प्रतिषेधति। कथम्? अस्तीत्यादौ यद्यपि वस्तुतो भाव्याभावात् भावना न[5] सम्भवति, तथापि सा शब्दात्प्रतीयते। अतश्शब्दवाच्या सा तत्रापि विद्यत एव। एतदुक्तं भवति—विषयान्तरपरिदृष्टाया भावनाया इहाध्यारोप इति। एवमस्य ग्रन्थस्यार्थः श्रुत्या प्रतिभाति। स चायमनुपपन्न इति कैश्चिद्व्याख्यातृभिः परित्यक्तः, अन्यश्च [6]परिगृहीतः।

का पुनरस्यानुपपत्तिः? उच्यते। अध्यारोपकल्पना हि प्रतीतिवैलक्षण्ये सति सम्भवति। नचेह तदस्ति इति। कः पुनरस्यार्थः? उच्यते। अस्त्यादिष्वप्यस्त्येव भावना। भाव्यन्तु कर्तुर्घटादेः सत्तैव प्रकृत्यर्थभूता।

ननु किं सत्तासामान्यस्य भाव्यत्वम्? किं वा विशेषस्य? न तावत्सामान्यस्य; नित्यत्वात। विशेषस्य चेत्तर्हि घटस्यैव भाव्यत्वमुक्तं स्यात। तस्य चास्त्यर्थे कर्तृत्वान्न कर्मत्वं सम्भवति। उच्यते—पूर्वावस्थो घटः कर्ता उत्तरावस्थो घटस्तु कर्मेति न विरोधः इति॥

अत्र वयं पृच्छामः—भवत्वेतत्कादाचित्केषु घटादिषु। [7]नित्येष्वाकाशादिषु कथम्? इति। तत्रापि ह्यस्त्यादि प्रयुज्यते आकाशमस्ति भवतीति। नहि तत्र भाव्यं

---

१. वस्तुतोऽपि--ख.
२. भावेऽपि शब्दात्तथाप्रतीतेः--ख.
३. आस्ते--ङ.
४. भावसन्तत्यभेदात्—क ; भावसत्ताद्यभेदात्—ख ; भावः सत्तेत्यभेदः प्रसज्येत—ग, घ ; त्यभेदादभेदः--ङ.
५. 'न' नास्ति--च.
६. अन्यश्च गृहीतः--छ.
७. नित्येष्वकारादिषु--छ.

किञ्चिन्निरूपयितुं शक्यते। अतस्तत्र भावना नास्तीति कथमाख्यातप्रयोग इति। तत्र समारोपेण प्रयोग इति चेत्—घटो भवतीत्यत्रापि तथा स्यात्। नहि तत्रात्र च प्रतीतिर्भिद्यते। अपि च करोत्यर्थो हि भावना। नचेह करोतिः प्रयुज्यमानो दृश्यते। नहि किं करोतीति पृष्टे अस्ति भवतीति वा प्रतिवचनं दृश्यते। यदि पुनरस्त्यादिः करोतिना एकार्थः स्यात् तदा तत्समानाधिकरणोऽपि कदाचित्प्रयुज्येत पचत्यादिवत्। न च प्रयुज्यते। तस्मान्नास्त्यादिषु भावना। किन्त्वन्यत्र परि[1]दृष्टैवोपचर्यते। नचैतावता सिद्धकर्तृविषयस्याप्याख्यातप्रत्ययस्यौपचारिकत्वम्, तत्र करोत्यर्थस्य प्रतीयमानत्वात्।

एवमस्य ग्रन्थस्य कथञ्चिद्यथाश्रुतेऽप्यर्थे ग्रहणयोग्ये सत्यपि कैश्चिद(यम)न्यथा व्याख्यातः—वस्तुतः तदभा(तोऽभा)वेऽपीति। कर्तृव्यतिरिक्तभाव्याया भावनाया अभावेऽपि शब्दात्प्रतीतेरस्त्यर्थस्य कर्तुर्घटादेरेवावस्थान्तरविशिष्टस्य भाव्यत्वसम्भवाच्छब्दाद्भावनाप्रतीतिरुपपद्यत इत्यर्थः। कथन्तर्ह्यत्र करोतेः प्रयोगाभावः? स्थूलदृष्ट्येह [2]भावनाप्रतीतेरभावात्। अत्र हि कर्तव्या(र्तृव्य)तिरिक्तभाव्याभावेऽपि कर्तुरेव घटादेः केनचिदवस्थाभेदेन भाव्यत्वसम्भावनानिरूपणद्वारेण भावना सूक्ष्मदृष्ट्या दृश्यते। न पुनः सिद्धकर्तृविषय इव स्थूलदृष्ट्या। स्थूलदृष्ट्यनुसारी हि प्रायेण लौकिकः[3] शब्दव्यवहारः। तस्माद्घटोऽस्तीत्ययमर्थः—[4]घटः स्वात्मानं सन्तं करोतीति। कथं [5]तर्ह्यसतो घटस्य कर्तृत्वम्? अत्यन्तासत्त्वानभ्युपगमात्। कथन्तर्हि नित्येष्वाकाशादिष्वस्त्यादेः प्रयोगः? उच्यते। तत्र भावनाया अभावनिश्चयाद्धात्वर्थमात्रविवक्षया प्रयोगः। प्रकृतेश्च केवलप्रयोगानर्हत्वात्प्रत्ययस्य प्रयोगः। अपि च योऽपि भावनाया अपि धातुनैवाभिधानं मन्यते, तस्याप्येष दोषस्समान एव। अस्त्यादौ धातोरपि प्रत्ययस्येव भावनां प्रति व्यभिचारात् (इति) अलमतिवाचालतया॥

१. दृष्टैहोप—छ.
२. भावनाप्रतीत्यभावात्—ङ.
३. लौकिकशब्द—ङ.
४. घटस्यात्मनः सन्तं—च.
५. तर्ह्यसते कर्तृत्वं—च.

# PRAMEYAMĀLĀ

BY

VĀTSYA VARADAGURU

EDITED WITH TRANSLATION AND NOTES

BY

**R. RAMANUJACHARI, M.A.,**
*Professor of Philosophy, Annamalai University.*

AND

**Pandit K. SRINIVASACHARYA, SIROMANI,**
*Sanskrit Department, Annamalai University.*

यच्चोक्तं—विशेषणान्तरविशिष्टे वस्तुनि विशेषणान्तरान्वयाद्विशेषणानामन्योन्यसमवायप्रसङ्ग इति; तदसत्; विकल्पासहत्वात्। किं पदार्थस्मरणदशायामन्योन्यसमवायप्रसङ्गः? अथ परामर्शदशायाम्? आहोस्विद्वाक्यार्थाभिधानदशायाम्? न तावत्प्रथमः कल्पः। स्मरणदशायां पृथक् पृथक् पदार्थस्मरणेन मिथोऽन्वयप्रसङ्गाभावात्। नापि द्वितीयः; एकस्मिन्वस्तुन्यविरुद्धानेकविशेषणसमवायस्य प्रत्यक्षावगतस्य यथावस्थितवस्तुपरामर्शदशायां परामृश्यमानत्वात्। नापि तृतीयः; वाक्यार्थाभिधानदशायां सर्वैः पदैर्युगपदनेकविशेषणविशिष्टैकवस्तुविषयैकज्ञानजननेन क्रमाभिधानप्रयुक्तान्योन्यसमवायप्रसङ्गाभावात्। यथैव द्वे चक्षुषी जातिगुणाद्यनेकविशेषणविशिष्टैकवस्तुविषयामेकां धियं युगपज्जनयतः, तथैवानेकानि पदानि युगपदेव तत्तद्विशेषणविशिष्टैकवस्तुविषयैकज्ञानजनकानि भवन्ति; यथादृष्टविषयत्वात्पदानां व्युत्पत्तेः। क्रमेणाभिधानानभ्युपगमे कथमुद्देश्योपादेयविभागसिद्धिरिति चेत्; उच्यते; ज्ञाताज्ञातविभागो ह्युद्देश्योपादेयविभागः; स च युगपत्प्रतिपादनेऽपि नापैति। एकेन वाक्येनैकस्य वस्तुनोऽनेकविशेषणान्वये युगपत्प्रतिपाद्ये तत्रैकविशेषणान्वयः प्रागेव ज्ञातः, विशेषणान्तरान्वयस्त्वज्ञात इति ज्ञाताज्ञातविभागपरामर्शः परामर्शदशायां हि संभवत्येव।

यदप्युक्तं—विशिष्टैक्यप्रतिपादने विशेष्यैक्यवद्विशेषणैक्यं प्रसज्यत इति; तदपि न साधीयः; भवत्पक्षेऽप्यसत्यत्वादिप्रतियोगिरूपविशेषणैक्यप्रसङ्गात्। प्रातिपदिकानां तत्तत्प्रतियोगिविशिष्टस्वरूपपरत्वेऽपि समानविभक्तेः प्रातिपदिकार्थैकदेशभूतविशेष्यमात्रैक्यपरत्वव्युत्पत्त्या न विशेषणैक्यं प्रसज्यत इति चेत्; तदस्मत्पक्षेऽपि समानम्। आवयोर्विशेषस्तु प्रागेवोक्तः। 'कार्ष्ण्यपीतिमरक्तिमादिव्यावृत्तं शौक्ल्यम्' इत्यादिषु प्रतियोगिभेदस्य तत्तद्व्यावृत्तस्वरूपस्य च शब्दोपात्तत्वान्न लक्षणाप्रसङ्गः, सत्यादिवाक्येषु न तथेति विशेषः। एवं तावच्छौक्ल्यादिदृष्टान्तवाक्यात् सदादिदार्ष्टान्तिकवाक्यस्य शब्दद्वारकं वैषम्यमुक्तम्। अर्थद्वारकं च वैषम्यं द्रष्टव्यम्। कथमिति चेत्; इत्थम्; शौक्ल्यादेः कस्यचिद्द्रव्यस्य द्रव्यान्तराद्व्यावर्तकतया धर्मान्तरानपेक्षत्वम्। ब्रह्मणस्तु न तथात्वमिति स्वरूपातिरिक्तव्यावर्तकधर्मापेक्षा अस्त्येव। किञ्च शौक्ल्यादिस्वरूपस्फुरणे हि न कार्ष्ण्याद्यध्यासप्रसङ्गः। अतस्तत्र स्वरूपमेव सकले-

तरव्यावृत्तिरिति युक्तमभ्युपगन्तुम् । ब्रह्मस्वरूपस्फुरणेऽपि तदितराध्यासाभ्युपगमाद्रजतादिव्यावर्तकाधिष्ठानस्वरूपातिरिक्तशुक्तित्वादिवत्सर्वाध्यासाधिष्ठानब्रह्मस्वरूपातिरिक्तसकलेतरव्यावृत्तिरूपधर्मोऽवश्याभ्युपगन्तव्यः ।

यच्चोक्तं—विशेषणभेदे विशेष्यभेदप्रसङ्ग इति; तदयुक्तम्; विशेषणभेदमात्रस्य विशेष्यभेदकत्वाभावात्। 'देवदत्तश्श्यामो युवा' इत्यादिषु विशेषणभेदेऽपि विशेष्यैक्यदर्शनात्। तत्र विशेषणभेदस्य स्वतः प्राप्तं विशेष्यभेदकत्वं प्रत्यक्षेणापोद्यत इति चेन्न; धर्मिवाचिपदैक्यात् समानविभक्तिनिर्देशाच्चैक्यप्रतीतेः। 'खण्डो मुण्डः पूर्णशृङ्गो गौः' इत्यत्र धर्मिवाचिपदैक्ये समानविभक्तिनिर्देशे सत्यपि विशेषणभेदाद्विशेष्यभेदः प्रतीयत इति चेत्, नैवम्; यतः स्वतः प्राप्तं तयोर्विशेष्यैक्यप्रतिपादकत्वं प्रत्यक्षेण तत्रापोदितम्। परोक्षेऽपि खण्डत्वादिविशेषणभेदे विशेष्यभेदप्रतीतिर्दृश्यत इति चेत्, परोक्षेऽपि श्यामत्वादिविशेषणभेदेऽपि विशेष्यैक्यप्रतीतिर्दृश्यत इति समानश्चर्चः। को निर्णायक इति चेत्, यज्जातीयविशेषणानां नियमेन भिन्नाश्रयत्वं प्रत्यक्षेण दृष्टं, तज्जातीयविशेषणानां परोक्षेऽपि विशेष्यभेदापादकत्वम्; यथा खण्डत्वादीनाम्। यज्जातीयविशेषणानां तु भिन्नाश्रयत्वनियमो न दृष्टः, तज्जातीयविशेषणानां धर्मिवाचिपदैक्ये समानविभक्तिनिर्देशे च एकविशेष्यसमवेतत्वं युक्तम्; यथा नीलत्वादीनामिति।

यच्चोक्तं—वाच्ये प्रधानांशस्य प्रतिपादनान्न लक्षणेति; तदप्यसत्; विशेषणद्वारेण विशेष्यपर्यवसायिनश्शब्दस्य द्वारानभिधाने द्वार्यभिधानासिद्धेः। अलाक्षणिकत्वेऽपि विशिष्टाभिधानस्वरसस्य शब्दस्य विशेष्यमात्रपरत्वे स्वारस्यहानिरवर्जनीया। सा च विरोधाभावे न युक्ता।

यच्च 'विषं भुङ्क्ष्व' इत्यादिषु सर्वपदलक्षणा दृष्टेति; तच्च तत्र विधिप्रत्ययांशस्य मुख्यत्वादयुक्तम्। तत्र विधिप्रत्ययव्यतिरिक्तशब्दलक्षणा च मुख्यार्थत्वे प्रमाणान्तरविरोधात्स्वीक्रियते। प्रस्तुते तु विरोधाभावान्न सा युक्ता।

यच्चोक्तं—समानविभक्त्यवगतैक्यविरोधाद्विशेषणपरित्याग इति; तदप्ययुक्तम्; प्रातिपदिकावगतविशेषणान्वयविरोधादैक्यपरित्यागापत्तेः। तथाहि—यदि समानविभक्त्य-

न्वयावगतत्वादैक्यं न हातुं शक्यते, तर्हि प्रातिपदिकान्वयव्यतिरेकावसितविशेषणान्वयः कथमिव हातुं शक्यते? यथा 'नीलमुत्पलम्, इत्यादौ। तत्र विशेषणान्वयस्तु प्रत्यक्षसिद्धत्वादङ्गीक्रियत इति चेत्, तत्रैक्यप्रतीतिरपि तथैवेति किमिति न स्यात्? समानविभक्तिनिर्देशे परोक्षेऽप्यैक्यप्रतीतिर्दृश्यत इति चेत्, तथैव प्रातिपदिकप्रयोगे परोक्षेऽपि विशेषणान्वयप्रतीतिर्दृश्यत एव। तस्मादैक्यप्रतीतिश्शाब्दी चेद्विशिष्टप्रतीतिरपि शाब्द्येवेति न कश्चिद्विशेषोऽन्यत्राभिनिवेशात्। तस्मात्सत्यादिवाक्यं सत्यत्वादिविशिष्टमेव ब्रह्म प्रतिपादयतीति सिद्धम् ॥

॥ इति वत्सकुलतिलकश्रीवरदगुरुविरचितायां श्रीभाष्यप्रमेयमालायां अखण्डवाक्यार्थभङ्गः ॥

---

## ॥ अथ त्रिविधपरिच्छेदराहित्यम् ॥

---

ननु 'सत्यं ज्ञानमनन्तं ब्रह्म' इत्यत्र अनन्तपदेन देशकालवस्तुपरिच्छेदराहित्यं विवक्षितम्। तत्र वस्त्वन्तरसद्भावो वस्तुपरिच्छेद इति ब्रह्मव्यतिरिक्तं वस्त्वभ्युपगच्छतो भेदवादिनो न ब्रह्मानन्त्यसिद्धिः। अद्वैतवादिनस्तु ब्रह्मव्यतिरिक्तवस्त्वन्तराभावात्तस्यैव ब्रह्मानन्त्यसिद्धिरिति चेत्; तन्न; भवतोऽपि ब्रह्मव्यतिरेकेणाविद्यामभ्युपगच्छतो ब्रह्मानन्त्यासिद्धेः। अविद्याया मिथ्यारूपत्वान्न दोष इति मा वोचः; मिथ्यारूपत्वेऽपि तथाविधायास्तस्या ब्रह्मव्यतिरेकस्यावश्याश्रयणीयत्वात्। इतरथा ब्रह्मणोऽविद्यात्वमविद्यायाश्च ब्रह्मत्वं वा स्यात्। न ह्यनिर्वचनीयजडरूपाया अविद्यायास्सच्चिद्रूपस्य ब्रह्मणश्च तमःप्रकाशयोरिवेतरेतरभावस्सम्भवति। तदुक्तं भवदीय एव भाष्ये 'युष्मदस्मत्प्रत्ययगोचरयोर्विषयविषयिणोस्तमःप्रकाशयोरिव विरुद्धस्वभावयोरितरेतरभावानुपपत्तौ सत्याम्' इति।

अथ मतम्—सजातीयवस्त्वन्तरसद्भावो वस्तुपरिच्छेद इति ब्रह्मणश्चाविद्यासजातीयत्वाभावादपरिच्छेद इति। यद्येवं, भेदवादिनोऽपि ब्रह्मव्यतिरिक्तस्य कृत्स्नस्य वस्तुनस्तद्धर्मत्वाद्ब्रह्मणस्तद्धर्मितया तद्विजातीयत्वादपरिच्छेदसिद्धिरिति समानश्चर्चः। अथ ब्रह्मणस्तद्व्यतिरिक्तस्य च धर्मधर्मिभावेन विजातीयत्वेऽपि सत्यत्वप्रमेयत्वादिना आकारान्तरेण सजातीयत्वमस्त्येवेति नापरिच्छेदसिद्धिरिति मन्यसे, एवं तर्हि जडत्वस्वयम्प्रकाशत्वादिना विजातीयत्वेऽप्यनादित्वभासमानत्वादिना आकारान्तरेण सजातीयत्वमविद्याब्रह्मणोरस्तीति तुल्यं चोद्यम्। एतच्चोद्यपरिजिहीर्षया सर्वथा सजातीयवस्त्वन्तरसद्भावो वस्तुपरिच्छेद इति वचनं भेदपक्षेऽपि समानम्।

किञ्च यथा देशकालपरिच्छेदौ स्वव्यतिरिक्तदेशकालसद्भाव इति नाङ्गीक्रियते, तथा वस्तुपरिच्छेदोऽपि स्वव्यतिरिक्तवस्तुसद्भाव इति न युज्यते वक्तुम्। देशकालपरिच्छेदयोरपि तथात्वमभ्युपगम्यत इति चेत्, तथा सति घटादीनामपि देशकालपरिच्छेदौ न स्याताम्। तेषां काल्पनिकदेशकालावच्छेदो विद्यत इति चेत्, तर्हि ब्रह्मणोऽपि तदवच्छेदस्स्यात्; काल्पनिकदेशकालयोर्विद्यमानत्वात्। वास्तवदेशकालावच्छेदो न घटादीनामपीति तेभ्यो ब्रह्मणो न कश्चिद्विशेषोऽन्यत्राभिनिवेशात्। किञ्च ब्रह्मव्यतिरिक्तस्य तद्गुणविभूतिभूतस्य वस्त्वन्तरस्यानन्यथासिद्धानेकप्रमाणसिद्धस्य अन्यथासिद्धानन्तपदमात्रेण न बाधशङ्कावकाशः। न ह्येकपदस्वारस्यानुरोधाय सर्वशब्दस्वारस्यभङ्गो युक्तः। तस्मान्न वस्त्वन्तरसद्भावो वस्तुपरिच्छेद इति वक्तुं युक्तमिति।

एवं स्थिते वस्त्वन्तरप्रतिघातो वस्तुपरिच्छेद इति केचित्। यथा सूर्यालोकादेः स्वतस्सर्वप्रदेशप्रवेशार्हस्यापि कुड्यादिभिः प्रतिहतिर्दृश्यते। देशपरिच्छेदस्तु स्वतस्सर्वप्रदेशप्रवेशानर्हता; यथा घटादेरिति। एवंविधो वस्तुपरिच्छेदो ब्रह्मणो नास्तीति ब्रह्मणोऽनन्तत्वसिद्धिरिति।

अन्ये त्वाहुराचार्याः—वस्तुपरिच्छेदो वस्तुनः परिमाणमिति। परिमितस्य हि वस्तुनः परिमितदेशवृत्तित्वम्। अवच्छेद्यस्य हि वस्तुनः परिमितत्वं वस्तुपरिच्छेदः; अवच्छेदकस्य देशस्य परिमितत्वं देशपरिच्छेद इति नानयोरैक्यम्। किन्तु वस्तुपरिच्छेदो देशपरिच्छे-

दस्य हेतुरिति हेतुहेतुमद्भावमात्रमेव ; यथा घटादेः परिमितत्वेन तदवच्छेदकस्य देशस्य परिमितत्वम् । अतो वस्तुपरिच्छेदो वस्तुनः परिमाणम् । तदभावाच्च ब्रह्मणोऽनन्तत्वसिद्धिरिति ।

त्र्यय्यन्तनिष्णातास्त्वाचक्षते—देशविशेषयोगितया निषेधो देशपरिच्छेदः ; यथा इदमिह न भवतीति । कालविशेषयोगितया निषेधः कालपरिच्छेदः; यथा इदमिदानीन्न भवतीति । वस्तुविशेषात्मतया निषेधो वस्तुपरिच्छेदः ; यथा इदमिदन्न भवतीति । नित्यस्य विभोस्सर्ववस्त्वात्मकस्य ब्रह्मणस्तदभावादानन्त्यसिद्धिरिति । तथाहि—पुरुषसूक्तनारायणानुवाकादिषु तावत्परस्य ब्रह्मणः ‘ स भूमिं विश्वतो वृत्वा ’ ‘ सर्वं व्याप्य नारायणस्स्थितः ’ ‘ येन सर्वमिदं प्रोतम् ’ ‘ विश्वतः परमं नित्यम् ’ ‘नित्यं विभुं सर्वगतम्’ इति सर्वदेशकालपरिच्छेदाभावमुक्त्वा, ‘ पुरुष एवेदं सर्वम् ’ ‘ यद्भूतं यच्च भव्यम् ’ ‘ विश्वमेवेदं पुरुषः ’ ‘ स ब्रह्मा स शिवः ’ ‘ स वै सर्वमिदं जगत् स च भूतं स भव्यम् ’ इति सर्ववस्त्वात्मकत्वेन वस्तुपरिच्छेदाभाव उक्तः । ‘ पुरुष एवेदं सर्वम् ’ ‘ यद्भूतं यच्च भव्यम् ’ ‘ स वै सर्वमिदं जगत् स च भूतं स भव्यम् ’ इति कालत्रयवर्तिसर्ववस्त्वात्मकत्वाभिधानेन अर्थात्कालपरिच्छेदाभावश्च प्रतिपादितः । तथा भगवता पराशरेणापि ‘ अपक्षयविनाशाभ्यां परिणामर्द्धिजन्मभिः ’ ‘ सर्वत्रासौ ’ इति श्लोकद्वयेन कालतो देशतश्च परिच्छेदाभावमभिधाय, ‘ तदेव सर्वमेवैतत् ’ इति सर्ववस्त्वात्मकतया वस्तुपरिच्छेदाभावः प्रतिपादितः ।

यत्तु—वस्त्वन्तरप्रतिहतिः वस्तुनः परिमाणं वा वस्तुपरिच्छेद इति, तत् तयोर्देशपरिच्छेदान्तर्भावेन पृथगभिधानन्न प्रयोजनवदित्यनपेक्षितोक्तेर्वस्त्वन्तरात्मतया निषेधरूपस्य परिच्छेदस्यानभिधानेनापेक्षितार्थावचनादारम्भणाधिकरणभाष्यविरोधाच्च त्र्यय्यन्तविदो न बहुमन्यन्ते । आरम्भणाधिकरणे हि देशकालपरिच्छेदयोः प्रतिपदार्थं तारतम्यं वस्तुपरिच्छेदस्य चैकरूप्यं भगवता भाष्यकारेणाभ्यधायि । वस्त्वन्तरात्मतया निषेधो वस्तुपरिच्छेद इति च तत्रैवोक्तं ‘ भेदवादिनस्तु ’ इत्यादिना । अतो वस्त्वन्तरात्मतया निषेधो वस्तुपरिच्छेदः ; तदभावाद्ब्रह्मणोऽनन्तत्वम् । ‘ अनश्नन्नन्यः ’ ‘ अन्योऽन्तर आत्मा ’

इत्यादिषु स्वरूपविवेकपरेषु वाक्येषु वस्त्वन्तरात्मतया निषेधो दृश्यत इति चेत्; अभिप्रायापरिज्ञानात्। एतदुक्तं भवति—वस्त्वन्तरसामानाधिकरण्यायोग्यत्वं वस्तुपरिच्छेदः। ब्रह्मणस्तु सर्ववस्तुशरीरकत्वात्सर्ववस्तुसामानाधिकरण्ययोग्यत्वेन तदभाव इति।

॥ इति वत्सकुलतिलकश्रीवरदगुरुविरचितायां श्रीभाष्यप्रमेयमालायां त्रिविधपरिच्छेदराहित्यम् ॥

## ॥ अथ सर्वशरीरत्वम् ॥

ननु सर्वस्य ब्रह्मशरीरत्वन्न सम्भवति; तल्लक्षणासिद्धेरिति चेत्, न; तदसिद्धेरेवासिद्धेः। तथाहि भगवान् भाष्यकारः—'चेष्टेन्द्रियार्थाश्रयश्शरीरम्' इति न्यायसूत्रोक्तं शरीरलक्षणत्रयं लौकिकवैदिकसकलशरीरव्यापित्वाभावेन जीवशरीरविशेषमात्रलक्षणविवक्षयोक्तं मत्वा सकलशरीरव्याप्तं लक्षणान्तरत्रयं दर्शयति 'यस्य चेतनस्य' इत्यादिना। यस्य चेतनस्य यद्द्रव्यं सर्वात्मना स्वार्थे नियन्तुं शक्यं, तत्तस्य शरीरम्; यस्य चेतनस्य यद्द्रव्यं सर्वात्मना स्वार्थे धारयितुं शक्यं, तत्तस्य शरीरम्; यस्य चेतनस्य यद्द्रव्यं शेषतैकस्वरूपं, तत्तस्य शरीरमिति त्रीणि शरीरलक्षणानि अन्योन्यनिरपेक्षाणि दृश्यन्ते। लोकवेदयोर्हि शरीरशब्दप्रयोगो यद्यद्वस्तुविषयो दृश्यते, तत्र सर्वत्रानुगतमेव शरीरलक्षणं वक्तव्यम्। लोके तावदत्यन्तविलक्षणाकारेषु क्रमिकीटपतङ्गनरपशुप्रभृतिष्वगौणः प्रयुज्यमानश्शरीरशब्दो दृश्यते। श्रुतिस्मृतीतिहासपुराणेषु परमात्मव्यतिरिक्तस्य कृत्स्नस्य चिदचिद्वस्तुनः परमात्मानं प्रति शरीरत्वं 'यस्य पृथिवी शरीरम्' 'यस्यात्मा शरीरम्' 'सोऽभिध्याय शरीरात्स्वात्' 'जगत्सर्वं शरीरं ते' 'तानि सर्वाणि तद्वपुः' इत्यादिभिर्व्यपदिश्यते। चेष्टाश्रयत्वादीनामेव शरीरलक्षणत्वस्वीकारेण जगद्ब्रह्मणोश्शरीरशरीरिभावप्रतिपादकानामेषां बहूनां वचसामौपचारिकत्वाङ्गीकारे जीवशरीरेष्वपि द्विपात्त्वद्विजन्मत्वसास्नादिमत्त्वादीनां कतिपयशरीरवर्तिनामन्यतमस्यैव शरीरलक्षणत्वस्वीकारेण

तल्लक्षणरहितजीवशरीरान्तरेषु लोकवेदयोश्शरीरशब्दप्रयोगस्यौपचारिकत्वेन निर्वाहः प्रसज्येत। तदप्रसक्तिश्च सर्वत्र शरीरशब्दप्रयोगसाम्यात्। तदत्रापि समानमन्यत्राभिनिवेशात्। यस्य इति षष्ठ्यन्तेन प्रतिसम्बन्धिवाचिना पदेन शरीरत्वं न घटत्वादिवदप्रतियोगिकम्; किन्तु पुत्रत्वादिवत्सप्रतियोगिकमिति दर्शयति। श्रुतिषु 'तस्माद्वा एतस्मादात्मनः' इत्यादिषु केवलात्मशब्दप्रयोगोऽपि तद्व्यतिरिक्तस्य वस्तुनस्तच्छरीरत्वं विवक्षितमिति ज्ञापनाय। 'चेतनस्य' इति पदं 'धारयितुं शक्यम्', 'शेषतैकस्वरूपम्' इति लक्षणद्वये प्रभाप्रभावतोः शरीरशरीरिभावव्युदासार्थम्। लक्षणत्रयेऽप्यात्मधर्मभूतज्ञानस्य शरीरत्वनिवृत्त्यर्थश्च। चेतनस्य—चैतन्यविशिष्टस्येत्यर्थः। यदिति धर्मिनिर्देशः। द्रव्यशब्देन जीवगतक्रियादीनां शरीरत्वं व्युदस्यते। सर्वात्मनेति कादाचित्कनियाम्यत्वादिमतां गर्भदासवस्त्राभरणगृहक्षेत्रादीनां शरीरत्वं निवर्त्यते। सर्वात्मना—यावद्द्रव्यभावीत्यर्थः। अत एव सृष्ट्यपवर्गादिभिरावापोद्वापवशादव्यवस्थितांशविशेषसम्बन्धानियतसमुदायाकारक्षेत्रज्ञसमष्टिधार्यप्रकृतौ द्वितीयलक्षणस्यातिव्याप्तिपरिहारश्च। स्वार्थे इति तत्तच्छरीराविषयेषु कार्येषु तस्य तस्य शरीरस्य नियाम्यत्वाभावेन लक्षणस्यासम्भावना निराक्रियते। स्वार्थे—स्वविषये, तत्तच्छरीरासाधारणे कार्ये इत्यर्थः। नियन्तुं धारयितुं शेषभूतमिति पदैः अनियाम्याधार्याशेषभूतेषु परमात्मादिष्वतिव्याप्तिर्निषिध्यते। शक्यमिति रुग्णादिशरीरेषु नियमनाद्यदर्शनेन लक्षणस्याव्याप्तिः परिहियते। तेषु हि तच्छरीरिकर्तृकनियमनादिकार्याभावेऽपि तच्छक्तिविषयत्वमस्त्येव। कार्यानुदयस्तु रोगादिप्रतिबन्धात्। यथा अग्न्यादेश्शक्तिप्रतिबन्धाद्दाहादिकार्यानुदयः। शक्यं—शक्तिविषयीभूतमित्यर्थः। तच्छेषतैकस्वरूपमिति भिन्नवाक्यतया निर्देशस्तु स्वार्थे शक्यमिति पूर्ववाक्यस्थपदद्वयानन्वयात्। वेदान्तिनस्सत्कार्यवादितया हस्ताद्यवयवानां समुदितानामेवावयवित्वेन शरीरत्वान्न तेष्वव्याप्तिश्शङ्कनीया। नियाम्यत्वादिकं हि समुदितानामेव दृश्यते; न विभक्तानाम्। एवमिन्द्रियेष्वपि नातिव्याप्तिः। मृतशरीरस्य चेतनवियोगक्षण एव विशरितुमारभ्य क्षणान्तरे विशीर्णत्वेनाशरीरत्वान्नाव्याप्तिः। तत्र शरीरशब्दव्यवहारस्तु पूर्वं शरीरतया क्लृप्तसङ्घातैकदेशगोचरत्वेनौपचारिकः। चेष्टाश्रयत्वादिलक्षणान्तरवादिनोऽपि समानमेतत्। कदाचिच्चेष्टायोगव्यवच्छेद एव लक्षणतया विवक्षित इति चेत्, तथाप्यन्तर्यामिब्राह्मणद्वयसुबालोपनिषत्प्रभृतिषूपनिषद्भागेषु स्मृतोति-

हासपुराणेषु च पृथिव्याद्यक्षरतमःपर्यन्तबह्वर्थविषयतया बहुशः प्रयुज्यमानस्य शरीरशब्दस्य लाक्षणिकत्वकल्पनाद्वरं मृतशरीरमात्रविषयतया प्रयुज्यमानस्य शरीरशब्दस्य लाक्षणिकत्व-कल्पनम् । किञ्च मृतशरीरस्यापि परमात्मापेक्षया शरीरत्वमस्त्येव । जीवात्मापेक्षया शरीरत्वं लाक्षणिकम् । तस्मादिदमेव समीचीनं शरीरलक्षणत्रयम् । न्यायसूत्रे तु जीवशरीरविशेषगोचरं लक्षणमुक्तमिति बोद्धव्यम् ।

यथा न्यायविदामेव प्रमासाधनप्रमाणत्ववचनं जीवगतप्रमासम्बन्धिप्रमाणमात्र-लक्षणविवक्षयोक्तम् ; न पुनर्जीवपरमात्मगतप्रमासम्बन्धिप्रमाणलक्षणविवक्षयेति व्याख्यातं तज्ज्ञैः । अतस्सूक्तं 'यस्य' इत्यादिना भाष्येण लक्षणत्रयम् । तत्र तृतीयलक्षणविवेकार्थं शेषलक्षणं व्याक्रियते । 'शेषः परार्थत्वात्' इति शेषशेषिभावपरं जैमिनीयं सूत्रं परैरन्यथा-व्याख्यातं मत्वा यथावद्व्याचष्टे—'परगतातिशयाधानेच्छयोपादेयत्वमेव यस्य स्वरूपं स शेषः परश्शेषी' इति । अस्यार्थः—अन्यस्य प्रयोजनमेव यस्य प्रयोजनं स शेषः ; अन्य-श्शेषीति । अत्र परशब्दोऽन्यपर्यायः । परातिशयशब्दयोः कर्मधारयसमासशङ्कामात्रनि-वृत्त्यर्थं गतेतिपदम् । अतिशयः—विशेषः, किञ्चित्कार इति यावत् । 'नाकिञ्चित्कुर्वतश्शे-षत्वम्' इति हि मीमांसकानां प्रसिद्धिः ।

अनेनातिशयशब्देन स्वरूपाननुकूलविनाशाद्याधायकानां शेषत्वशङ्काव्युदासः । फलविनाश्यस्य हि कर्मणः स्वगतविनाशाधायकफलं प्रति न शेषित्वम् । आधानशब्देना-तिशयं प्रत्यनधिकरणतया हेतुत्वं विवक्ष्यते । अनेन परगतमतिशयं स्वस्मिन्नापादयि-तुमिच्छयोपादेयस्य शेषिणः शेषत्वशङ्कानिवृत्तिः । इच्छयेति परगतातिशयस्येच्छाविषय-तया प्रयोजनत्वमुच्यते । तच्च 'परार्थत्वात्' इत्यर्थशब्देनोक्तम् । अर्थ्यत इत्यर्थः, इष्यत इति यावत् । अनेन स्वस्मिन्नप्यतिशयाधायके भृत्यादौ लक्षणस्यासम्भवशङ्कानिवृत्तिः । उपादेयत्वं—स्वीकार्यत्वम् । इच्छास्वीकारौ च शेषिणः शेषस्य वा अन्यस्य वा यथा-सम्भवम् । यत्र शेषी वा शेषो वा चेतनः, तत्र तयोरन्यतरस्येच्छास्वीकारौ । यत्र तूभयम-चेतनं प्रभाप्रभावद्यागतदङ्गादिकं, तत्रोभयव्यतिरिक्तस्य चेतनस्यैवेति । परस्मिन्नप्यति-शयाधायकस्य स्वामिनः परं प्रति शेषत्वव्युदासः । स्वरूपमिति स्वरूपातिरिक्तगुणाद्युपा-

धिनिरासः । स्वरूपं—स्वरूपप्रयुक्तम् ; न गुणादिधर्मप्रयुक्तमित्यर्थः । एवञ्च सर्वशेषित्वं सर्वशरीरकत्वञ्चेश्वरस्य सिद्धम् ।

॥ इति वत्सकुलतिलकश्रीवरदगुरुविरचितायां श्रीभाष्यप्रमेयमालायां सर्वशरीरत्वम् ॥

---

## ॥ अथ अपशूद्रनयादिविरोधोपपादनम् ॥

---

एवञ्च ब्रह्मणस्सर्वशरीरकत्वात् शरीरवाचिशब्दानाञ्च शरीरिपर्यन्तत्वात्सर्ववस्तु-सामानाधिकरण्यम् ; न पुनस्सर्वतादात्म्येन ; व्याघातश्रुतिविरोधादिदुष्टत्वात् । अत एव न बाधार्थसामानाधिकरण्यमपि ; विरोध्याकारान्वयाभावे प्रतीताकारबाधायोगात्, मुख्ये सम्भवति लाक्षणिकार्थस्वीकारायोगाच्च । तदेवं सत्य एव प्रपञ्चः । सगुणमेव ब्रह्म । तच्च जीवाच्छरीर(रि)त्वादिभिर्भिन्नम् । तादृशमेव चोपासितव्यम् । उपासनमेव च वेदान्तविहितमोक्षोपायः । तच्च कर्मानुगृहीतम् । कर्म च फलाभिसन्धिविशिष्टवेषेण मुमुक्षोर्हेयम् । तदेव तेन तत्तत्स्वर्गादिफलाभिसन्धिविरहेण परमात्मप्रीत्यर्थतयानुष्ठितमुपा-सनानुग्राहकम् । एवञ्च सति कर्मविचारस्य ब्रह्मविचारापेक्षया पूर्ववृत्तत्ववचनमुपपन्नम् ।

ये पुनर्वाक्यार्थज्ञानमात्रात् मिथ्याभूतबन्धनिवृत्तिरिति वदन्ति, तेषां प्रत्यक्षश्रुति-स्मृतिन्यायादिविरोधो भाष्ये प्रपञ्चितः ; शारीरकापशूद्राधिकरणनयविरोधश्च तत्रैव दर्शि-तः—तत्पक्षे शूद्रादीनामप्यर्थित्वसामर्थ्ययोरनपायात् कर्मणां विविदिषामात्रहेतुत्वाभ्यु-पगमात्, जन्मान्तरशतानुष्ठितैरपि तैर्विविदिषोत्पत्तिसम्भवात्, भेदवासनाकृष्टचेत-सामपि वेदान्तमन्तरेण साङ्ख्यादिभिरपि तत्त्वचिन्तनप्रवृत्तैर्बुभुत्सोत्पत्त्युपपत्तेः, तदनन्तरञ्च भवदभिमतैस्तर्कादिभिरपि तथाविधज्ञानसम्भवात्, शास्त्रजन्यस्यापि ज्ञानस्य ततो विशेषा-भावात्, अशास्त्रवश्यैर्वा भवत्सिद्धान्तनिष्ठैर्ब्रह्मविद्भिराचण्डालं तदुपदेशसम्भवादित्यादिभिर्हे-

तुभिः । तच्चाधिकरणमेवं प्रवृत्तम् । 'शुगस्य तदनादरश्रवणात् तदाद्रवणात् सूच्यते हि' 'क्षत्रियत्वगतेश्च' 'उत्तरत्र चैत्ररथेन लिङ्गात्' 'संस्कारपरामर्शात्तदभावाभिलापाच्च' 'तदभाव-निर्धारणे च प्रवृत्तेः' 'श्रवणाध्ययनार्थप्रतिषेधात्' 'स्मृतेश्च' इति । पूर्वत्र देवादीनामधिकार उक्तः ; इह तु शूद्रस्य किं ब्रह्मविद्यायामधिकारोऽस्ति न वेति विचार्यते । अस्तीति पूर्वः पक्षः । नेति सिद्धान्तः । तदर्थं विचार्यते किं शूद्रस्य साङ्गब्रह्मविद्योपसंहारसामर्थ्यमस्ति न वेति । यदास्ति तदा शूद्रस्याधिकारसम्भवः । यदा तु न, तदा अनधिकार इति फल-फलिभावः ।

तत्र पूर्वः पक्षः—ब्रह्मविद्यायां शूद्रस्याधिकारस्सम्भवतीति, अर्थित्वसामर्थ्ययो-स्सम्भवात् । आध्यात्मिकादिदुःखाभितप्तस्य तज्जिहासया हेयप्रत्यनीककल्याणगुणगणा-करब्रह्मप्राप्तावर्थित्वं सम्भवति । सामर्थ्यञ्च पटुतरदेहेन्द्रियादिकम् ; अतः त्रैवर्णिकव-द्ब्रह्मोपासनं सम्भवति । ब्रह्मस्वरूपतदुपासनप्रकारज्ञानञ्चानधीतवेदस्यापि शूद्रस्य इति-हासपुराणश्रवणादेव सम्भवति । अस्ति हि शूद्रस्यापि इतिहासपुराणश्रवणानुज्ञा । 'श्रावयेच्चतुरो वर्णान् कृत्वा ब्राह्मणमग्रतः' 'शूद्रस्सुखमवाप्नुयात्' 'शूद्रोऽपि महत्त्व-मीयात्' इत्यादिभिः ।

ननु उपासनविधीनां स्वाध्यायजन्यमेव ज्ञानमुपकारकम्, नेतिहासादिजन्यम् ; यथा ज्योतिष्टोमादिकर्मविधयः त्रैवर्णिकविषयाध्ययनविधिसिद्धस्वाध्यायसम्पाद्यज्ञानलाभेन सविषयत्वात् शूद्रादेरकल्पस्वाध्यायादिकल्पनासम्भवात्तदेव स्वोपायतया स्वीकुर्वन्ति ; तथो-पासनविधयोऽपीति पूर्वकाण्डोदितापशूद्राधिकरणन्यायेनैव सिद्धत्वात् कथमिह ब्रह्मोपासने शूद्रस्याधिकारः पुनराशङ्क्यते ? उच्यते--स हि न्यायस्तत्रैव जीवति, यत्रापवादवचनन्न दृश्यते । यत्र त्वपवादकं वचनमस्ति, तत्र तु नायं न्यायः प्रवर्तितुमर्हति । न हि वचनविरोधे न्यायः प्रभवति ; वचनाङ्गत्वान्न्यायस्य । 'प्रमाणानुग्राहकस्तर्कः' इति हि न्यायविदः । यथा 'रथकारोऽग्नीनादधीत' 'निषादस्थपतिं याजयेत्' इत्यादिष्वपशूद्रनयबाधेन श्रुतिसिद्धो रथकारादेराधानाद्यधिकारोऽङ्गीक्रियते । एवमत्राप्यपशूद्रनयबाधेन ब्रह्मोपासने शूद्रस्याधिकार-श्शङ्क्यते । किं पुनरिहापशूद्रनयातिक्रमकारणम् ? वचनमेवेति ब्रूमः । 'आजहारेमाश्शूद्रा-

नेनैव मुखेनालापयिष्यथाः' इति छान्दोग्ये संवर्गविद्यायां रैक्वो जानश्रुतिं शूद्रशब्देनामन्त्र्य तस्य ब्रह्मविद्यामुपदिशति। इतिहासपुराणेषु विदुरादीनां ब्रह्मविद्यानिष्ठतादर्शनं श्रुतिसिद्धमधिकारमुपबृंहयति। यज्ञादिकर्मापेक्षत्वं विद्यायाश्शूद्रानधिकारं गमयतीति चेत्, न; यथा अनाश्रमिणां विदुरादीनां आश्रमिणां नैष्ठिकादीनाञ्च विद्यानिष्ठत्वदर्शनात्तेषु यज्ञाद्यनपेक्षा विद्येति स्वीक्रियते, तद्वदत्रापि शूद्रस्य विद्याधिकारे सिद्धे स्ववर्णोचितपूर्ववर्णशुश्रूषाद्यङ्गिका विद्या शूद्रे, न पुनर्यज्ञाद्यपेक्षेति निश्चीयते। अतश्शूद्रस्याप्यधिकारोऽस्तीति।

राद्धान्तस्तु—न शूद्रस्य ब्रह्मविद्याधिकारस्सम्भवतीति; सामर्थ्याभावात्। न ह्यनधीतवेदस्याश्रुतवेदान्तस्य ब्रह्मस्वरूपतदुपासनप्रकाराद्यनभिज्ञस्य शूद्रस्य विद्योपसंहारसामर्थ्यसम्भवः। कर्मविधिवदुपासनविधयोऽपि त्रैवर्णिकविषयाध्ययनविधिसिद्धस्वाध्यायसम्पाद्यज्ञानमेव हि स्वोपायतया स्वीकुर्वते। इतिहासादेस्तु वेदोपबृंहणद्वारेणैव ज्ञानहेतुत्वम्; न स्वातन्त्र्येण; 'इतिहासपुराणाभ्यां वेदं समुपबृंहयेत्' इति वचनात्। श्रवणानुज्ञानन्तु पापक्षयादिफलार्थम्, नार्थज्ञानार्थम्। विदुरादयस्तु भवान्तराधिगतज्ञानाप्रमोषाद्विद्यानिष्ठा इति न तच्छूद्राधिकारलिङ्गम्। संवर्गविद्यायां तु शूद्रशब्दः शोचनाच्छूद्र इत्यवयवशक्त्या ब्रह्मज्ञानाभावनिमित्तशोकवति क्षत्रिये जानश्रुतौ वर्तते। रथकारन्यायेन रूढिशक्तिरेव किमिति नाद्रियत इति चेत्; उच्यते—पूर्वापरपर्यालोचनया जानश्रुतेः क्षत्रियत्वावगमादवयवशक्तिनिमित्तभूतस्य शोकस्य श्रुत्यैव विस्तरेण प्रतिपादनाच्च यौगिकोऽत्र शूद्रशब्द इति निश्चीयते। रथकारादौ तु नावयवार्थप्रतिपादकं वचनमस्ति। नापि त्रैवर्णिकत्वलिङ्गं किञ्चिद् दृष्टमिति न रूढिशक्तिबाधः। अतश्शूद्रशब्देन जानश्रुतिमामन्त्र्य ब्रह्मविद्योपदेशः न विद्यायाः शूद्राधिकारमापादयति। तस्मादपशूद्रनयातिक्रमकारणाभावाद्ब्रह्मविद्यायामपि स एव न्यायः प्रवर्तत इति नाधिकारश्शूद्रस्यास्ति। स चायं न्यायोऽपास्तसमस्तवर्णाश्रमधर्माणां स्वाज्ञानमात्रकलुषितपरब्रह्मणां कलिब्रह्ममीमांसकानामसङ्गतः। ये पुनरिदानीं योगसिद्धिहानिकरसम्माननाभीरुष्वनाविष्कृतशक्तिविद्याभिजनममहिमसु जडवदाचरणमात्रप्रवृत्तेषु अदूषितसर्वधर्ममर्यादेषु आदिभरतादिष्वपि स्वैरचारमारोप्य वर्णाश्रमधर्मव्यवस्थातिलङ्घिन आचण्डालमेकीभूयान्तर्गतचार्वाकादिमर्यादाः ब्रह्मविदो भव-

न्ति, तैस्सह वादरूपसम्भाषणमपि निरयपतनकारणं वदन्ति सन्तः । श्रुति-स्मृत्यादयस्तु निर्भया जगद्धिताधिकृताः कृत्स्नांस्तान्प्रतिक्षिपन्ति 'नाविरतो दुश्चरितान्नाशान्तो नासमाहितः । नाशान्तमनसो वापि प्रज्ञानेनैनमाप्नुयात्' 'स खल्वेवं वर्तयन् यावदायुषं ब्रह्मलोकमभिसम्पद्यते न च पुनरावर्तते' 'नियतस्य तु सन्न्यासः कर्मणो नोपपद्यते । मोहात्तस्य परित्यागस्तामसः परिकीर्तितः ।' 'सतां मार्गमदूषयन्' इत्यादिकाः । सूत्रितश्च 'सर्वान्नानुमतिश्च प्राणात्यये तद्दर्शनात्' इति 'अनाविष्कुर्वन्नन्वयात्' इति च । अतस्त्रैवर्णिकानामेव विधिनिषेधशास्त्रकिङ्कराणां ब्रह्मविद्याधिकार इति सिद्धम् ।

॥ इति वत्सकुलतिलकश्रीवरदगुरुविरचितायां श्रीभाष्यप्रमेयमालायां
निर्विशेषवादिनां अपशूद्रनयादिविरोधापादनम् ॥

॥ श्रीभाष्यप्रमेयमाला समाप्ता ॥

॥ वात्स्यश्रीवरदगुरवे नमः ॥

॥ शुभमस्तु ॥

---

*The Philosophy of Aesthetic Pleasure* by P. Pancapagesa Sastri, with a Foreword by Mahamahopadhyaya Prof. S. Kuppuswami Sastrigal. Pp. xxiv+324. 1940. (Annamalai University).

This volume contains the Thesis presented by the author for the M. O. L. Degree of the University of Madras. Its theme is Indian Aesthetics—a subject in which, as in so many others investigated by them, the ancient Indians have advanced numerous theories. Many of these theories are briefly referred to here; but the volume is chiefly concerned with the elucidation of the most prominent among them, which is known as the theory of *rasa*. The book is divided into ten chapters. The first three of them deal with the subject in a general way, and point out the importance as well as the antiquity of the *rasa-theory*. It is mentioned already in the *Nāṭya-śāstra* of Bharata, the earliest work on Sanskrit literary criticism that has come down to us. The next four chapters treat of the chief interpretations of Bharata's view of *rasa* and show how the latest of them, which we owe to Ānanda-vardhana and Abhinavagupta of the 9th and 10th centuries respectively, is the best. This view superseded all the rest, and has virtually dominated Indian literary criticism ever since. The next two chapters are taken up with the discussion of the exact significance of this theory, the extent of its influence and the modifications, all more or less slight, which it underwent in later times. The last chapter deals with the number of *rasas*, and considers in particular the question whether the *śānta* can be the predominant *rasa* in poetry and in the drama. The view maintained here, on the strength of the opinions of great critics and the practice of artists of the first rank like Vyāsa and Aśvaghoṣa, is that it can well be so.

The literature relating to this subject in Sanskrit is vast, and the author shows a close acquaintance with it. His exposition of the main theme, 'the suggestion theory' of *rasa* as he terms it, is very good. But there are large portions of the book which dwell at unnecessary length on matters that are well known to students of Sanskrit criticism. We have also come across a few doubtful or misleading statements. In dealing with Bhaṭṭa Lollaṭa's view, for instance, it is stated (pp. 64 ff) that the *anubhāvas* or expressions of the emotions help the spectator in inferring the mental attitude of the hero and the heroine. But the

spectator's conclusions in this respect have nothing whatever to do with the 'generation of *rasa*' in the actors or the characters represented by them. The *anubhāvas* seem rather to serve as aids to the hero and the heroine themselves to discover each other's frame of mind. But speaking as a whole, the book brings together a good deal of information touching the theory of *rasas*, which now lies scattered in many books; and its publication will accordingly be welcomed by all students of Sanskrit literature. The various indexes included in the volume and the analytical table of contents will greatly facilitate the work of referring to it.

M. H.

---

*Nītimālā* by Nārāyaṇārya: Sanskrit Text edited with Introduction and Notes, by Prof. R. Ramanujachari, M.A., and Pandit K. Srinivasacharya, Siromani. cxii+pp. 94. 1940. (Annamalai University).

This is the second volume of the "Philosophy Series" planned by the Annamalai University, of which the first, viz., the *Nyāya-kuliśa*, edited by the same two scholars, appeared some time ago. Like it, this book also is published for the first time now; and the editorial work has been done with all the critical care to which we drew attention in reviewing the earlier volume in this journal. It was a high standard which they set themselves in it, and that standard is fully maintained here. Students of Indian philosophy are greatly indebted to the learned editors for placing within their easy reach such rare and important works, and to the University for encouraging their publication. The text of the *Nītimālā*, as printed here, is the result of collating three manuscripts; and all the variations in reading found in them have been noted. In one or two places, there are small gaps, but otherwise the text is complete; and where the Mss. are corrupt or are defective in any other way, the emendations suggested by the editors seem to us to be quite satisfactory. They have also included in the volume lucid summaries of the argument of the work both in Sanskrit and in English, the latter being somewhat fuller than the former. These summaries, together with the analytical table of contents prefixed to the text, are sure to be of great service to students. There are also appended to the edition various indexes to facilitate reference to the work. We may observe, in passing, that the quotation beginning with *Tallabdhiḥ* is not from Bodhāyana, as indicated in the Index to quotations, but from a different thinker, viz., Brahmanandin who is known as the Vākya-kāra.

The author, Nārāyaṇarya belongs to about the end of the 12th or the beginning of the 13th century and holds an honoured place among the exponents of Viśiṣṭādvaita as shown, for example, by Vedānta Deśika's reference to him as 'a man of wisdom' (*prājña*). He seems to have written, at least, one other book—an abridgement of the *Mīmāṁsā-darśana*. The present work is written in prose interspersed with verses, and contains a brief but a very clear exposition of the fundamentals of Rāmānuja's teaching. It is divided into 10 chapters. Of them, four are directly concerned with the refutation of doctrines which, like the Viśiṣṭādvaita, are based primarily on *Śruti* or Revelation, viz., Mīmāṁsā and some schools of Vedānta. The Mīmāṁsā subordinates the Upanishads to the *karma-kāṇḍa* of the Veda and thus differs from the Vedānta in the view it takes of the final import of Vedic teaching. One of these four chapters, viz., the second in the order of the book, criticises this view and points out that it is the *jñāna-kāṇḍa* or the Upanishads which constitute the principal part of the Veda. The next three chapters are devoted to a discussion of the doctrines of Śaṅkara, Bhāskara and Yādava, which appear to have had the greatest vogue about the time, and make out that they are not only at variance with the teaching of the Veda, taken as a whole, but are also logically untenable. The remaining chapters also refer to other doctrines; but they do so only incidentally, their main purpose being the exposition of one or more distinctive aspects of the Viśiṣṭādvaita view. Chapters 6 and 7, for example, together elucidate the conceptions of Brahman or God, the individual souls and the physical world, showing how the latter two are other than, though inseparable from, the first. Chapters 9 and 10 deal similarly with the nature of the ideal state of *mokṣa,* and with the twofold way of *bhakti* and *prapatti* recommended for achieving it.

There are two or three points in which the views put forward in this work are not precisely the same as are now commonly associated with the Viśiṣṭādvaita doctrine; but none of them, we should add, is really in disaccord with the spirit of Rāmānuja's teaching. For example, the explanation of error given here (p. 25) is what is known as *anyathā-khyāti* and not *yathārtha-khyāti* as set forth in the *Śrī-bhāṣya*. But from what Vedānta Deśika states in his *Sarvārtha-siddhi* (iv. 9), we cannot say that the former explanation was altogether unacceptable to Rāmānuja. Again, the significance which is attached here to *vidhis* (p. 60) is different from that assigned to them by Rāmānuja in his *Vedārtha-saṁgraha*. But the difference is not material as pointed out by the same thinker (*ibid.* v. 96), and is due merely to a shifting of the emphasis from one aspect of a *vidhi* to another. While *Rāmā-*

*nujā's* view lays stress on the idea of the good involved in it and keeps its mandatory character in the background, our author's explanation of it does the reverse.

The work is, comparatively speaking, easy; and, by its style as well as by its size, it is very well suited to meet the needs of those that desire to make their first acquaintance with Rāmānuja's doctrine. With the English aids to study, which the present edition contains, it should prove particularly useful to students in our Universities. It may not be so comprehensive as the *Yatīndra-mata-dīpikā* which is now sometimes used as a text-book by beginners; but it is less packed with facts, and its treatment of the subject is, on the whole, much better from the standpoint of students of philosophy.

M. HIRIYANNA.

Annamalai University Economic Series—No. 7

GENERAL EDITOR

Professor B. V. NARAYANASWAMY NAIDU

# GROUNDNUT

Section I

# GROUNDNUT—ITS CULTIVATION

Groundnut is cultivated both as a rain-fed and also a hot weather irrigated crop. The new "Saloum" variety introduced recently has gained ground and has been slowly extending to the various parts of the district. The crop is sown generally as a mixed crop and is cultivated along with Tenai or Ragi where well-irrigation is in practice. In hot weather, Ragi is first sown or planted, and groundnut is subsequently dibbled in when the cereal is in flowers. Occasionally it is grown as a pure crop, in which case it is sown early in January. As the cultivation of the dry crop is profitable, there is a tendency to utilize more cattle manure in these lands than on wet ones. Though the cereals are inter-cultivated with this crop, yet the yield of groundnut has not gone down. On the other hand, the yield has increased owing to the recuperative effect the groundnut crop has on land. The inter-cultivation of groundnut with cereals provides the thick population of this district with a means of improving its poor income.

Since the market for groundnut has been declining in recent years, there has been an attempt on the part of some ryots to change over to cotton cultivation to a certain extent. This new crop is slowly being introduced in the South Arcot District and there is a ginnery working at Villupuram.

The groundnut plant is an annual herbaceous plant, belonging to the natural order of Papilonaceae, with pea-shaped flowers. The leaves have four leaflets which are arranged on the leaf-stalk in two pairs exhibiting sleep movements at night. The stem attains from one to three feet in height according to the variety and the soil in which the plant is cultivated. Though there are several varieties of this plant under cultivation in different parts of the globe, the two varieties that are commonly met with in India are the spreading and bunch types. The commercial classification of the varieties is based on the shape of the mature pods, the number and colour of the seeds they contain and the manner in which the pods are produced on the stem of the plant.

The common variety that is grown in South Arcot takes five to six months to mature. In the initial stages of the plant's growth very little moisture is required. Till the flower begins to appear, the plant can withstand drought. As such, the sowing period is so selected as to make rain available in the last phase of the plant's life. In those tracts where the influence of the South-West monsoon is meagre, but are affected by the North-East monsoon, sowing operations are undertaken towards the end of July or at the beginning of August. In tracts having summer showers with seasonal rains from the middle of May, the crop is raised in April. In brief, the cultivator adjusts the sowing according to the seasonal rainfall of the tract.

Loose sandy loam is best fitted for the raising of this crop. Cultivation in heavy soil increases the cost of production and lowers the yield. The land is well drained before sowing as the plant will get diseased if water is allowed to stagnate in the field. Even a slight rainfall at the initial stages of the plant's growth will adversely affect the growth of the plant.

The land is first prepared for the crop by weeding in the initial stages. Weeds like Hariali and Korai seriously hamper the growth of the plant, affecting the yield. Hence the weeds, which grow after the seasonal rain, are first cleared in order to keep the beds clean. After weeding, the land is ploughed two to six times before manuring.

Manure is applied to the land before the last ploughing. Five to ten cartloads of manure, a mixture of ash, town or village sweepings and cattle manure are applied to an acre of land. In addition to these, tank silt and sheep penning are also spread over the field.

A few days after sowing, the nuts germinate. Slowly the plant covers the ground and begins to produce flowers. The rate of growth of the plant determines the rate of production of flowers. The maximum growth is seen during the third and fifth fortnight. Hence this period is termed the "grand period of growth." Followed by this period, is a decrease in the rate of growth, with a subsequent increase. After that there is a gradual decrease in growth. The critical period in its growth, which is definite but varying, is just before the first fortnight of flowering. It is necessary to see that this period coincides with the most advantageous part of the season so that the best development of the plant may be obtained.

Regarding flowering, there are three distinct phases. The bunch varieties of short duration start flowering about the 23rd day after sowing. After the first flowering, there is a rapid and steep increase in the production of flowers. After a week when the maximum rate is reached, there will be a progressive fall. In the local and "Saloum" varieties the flowering period begins after 34 and 32 days. As already remarked, the period of flowering lasts for a month.

The soil is loosened with the hand hoe to enable the plant to grow well. For this, labour is essential and, therefore, any scarcity of labour will greatly handicap the growth of the plant. Wherever scarcity of labour is felt, the method of sowing the crop in rows, intercultivation and the use of the bullock hoe, are strongly recommended by the Agricultural Department. Frequent hoeings are necessary to increase the growth of the plant. No stipulation as to number of hoeings can be made, for they depend on the soil and the variety of crop sown. But it can be said with safety, that such a procedure has to be continued for the first three months of the plant's growth. When the seasonal rains cease, the hoeings are done in order to retain the moisture in the ground and also to prevent the emergence of weeds. As the interspaces between plants are ample, bullock hoes can be utilized for hoeing.

Groundnut is cultivated as a mixed crop in many tracts. In South Arcot, it is grown along with cereals like Cholam or Cumbu. For this purpose " long duration varieties " are chosen, so that when the cereal is ready for harvest, the groundnut crop will be sufficiently grown up. Till then the cereal will serve to shade the young plant.

The method usually adopted is to broadcast the seed of the cereal and then level the ground. The seed-bed is made firm by dragging a harrow across the ploughing. When the cereal has grown six inches, weeding and hoeing are undertaken. Hoeing and weeding are repeated when the rains set in and the land is thus prepared for the sowing of groundnut which is done when the cereal begins to flower. The groundnuts are then dibbled in nine inches apart. This mode of cultivation greatly benefits the cereal crop.

For sowing, the cultivators purchase seeds occasionally. Clean pods are purchased and are shelled by hand. Only well-filled kernels are used for sowing, and mouldy ones are rejected.

The cultivators drop the seed into the plough furrow behind each plough when the crop is raised as a pure one. This involves hardship to

the cultivator, for, as the plants are too close, their full growth is checked and further hoeing operations cannot be successfully caried out. Besides this, if heavy rain sets in, the plots get water-logged and thus the plants are injured.

An improved method of sowing is generally to drop the seed at intervals of six to nine inches into every third plough furrow according to the quality of the soil. This procedure saves a considerable quantity of seeds and also reduces the cost of cultivation.

When the pods are formed at the end of the fourth month, the plant is ready for harvest. The stalks of the underground pods get dried and the skin of the kernels turns pink. This is the proper time for the crop to be lifted up. Even at this stage some pods may be immature.

The method of harvesting differs according to soil and climate. In South Arcot, in light loamy soil a mammottie is attached to a drought pole and worked like a plough to loosen the soil to a depth of about four inches. If the crop is too ripe or if the soil has hardened, many of the nuts may stick to the soil. To remove them, the pods at the top are taken first and pods adhering to the stem are picked next. Then the soil is loosened and the pods left underground are raked and picked.

When the harvesting is over the produce is spread in the open air in sunlight for drying and at nights they are heaped up and covered with straw. This process is repeated until the pods are completely dry.

We have already noted that the crop is also raised as an irrigated summer crop. Since it is a profitable venture, the cultivators adopt this procedure.

The crop is grown as a mixed one along with a cereal like ragi or cholam which is broadcast in the field when sown. When the crop is raised as a pure one, the seeds are dibbled in at 6″ to 9″ apart in the dry beds and watered immediately. At times the cultivators sow the local Mauritius variety close together but this entails heavy expenditure as we have already noticed.

Various methods of cultivation have been tried for experiment in the Agricultural Research Station, Palur, and the results recorded. One of its improved methods is as follows :—Seeds are sown in the furrow of every third plough furrow at intervals of 6″—9″. Before sowing the land is well irrigated and left dry. As soon as the soil is dry, it is

levelled by means of a harrow in order to preserve the moisture in the soil to facilitate germination.

Being an irrigated crop, sufficient drains are made for water to flow. If the land is uneven, subsidiary channels are constructed across the rows from where the crop can be irrigated in each direction along the furrows. The furrows are occasionally raked with bullock-hoes to prevent evaporation. In the initial stages the irrigation is done once in a fortnight. The length of the interval between the irrigations varies with the texture of the soil. Hoeing and weeding operations cease when the plant begins to spread out. The furrows are kept open for frequent irrigation. When the pods begin to mature irrigation is stopped. Harvesting is done in the same manner as the rain-fed crop.

The yield varies according to the variety and also the manner of cultivation. As a rainfed crop, the bunch and spreading varieties produce on an average 750 lbs. and 1,000 lbs. of pods respectively. On the other hand, the yield has been calculated at 2,000 lbs. and 2,500 lbs. for the bunch and spreading varieties when cultivated as an irrigated crop.

The cost of cultivation for both forms, rain-fed and irrigated, is tabulated below to show the difference in the expenditure involved. The net profit has been calculated to indicate which procedure is more paying. The figures are compiled from information gathered from the Tindivanam Agricultural Research Station.

[Experiments regarding yield, the variety to be utilized for maximum production and for thwarting pests and diseases, are described in later sections.]

### Cost of Cultivation Tables.

(Spreading type—calculated per acre).

*Rain-fed*

1. *Preparatory Cultivation.*

| | Rs. as. ps. | Rs. as ps. |
|---|---|---|
| Ploughing four times—6 pairs @ 10 annas a pair (including those for covering manure and sowing) | .. | 3 12 0 |

| | | Rs. as. ps. | Rs. as. ps. |
|---|---|---|---|
| 2. | *Manures and Manuring.* | | |
| | Cost of ten cart-loads of manure @ 6 annas a cart load .. | 3 12 0 | |
| | Charges for carting—2 carts @ Re. 1 per cart .. | 2 0 0 | |
| | Spreading manure—6 women at 2 annas each .. | 0 12 0 | |
| | | | 6 8 0 |
| 3. | *Seeds and Sowing.* | | |
| | Cost of 75lbs. of kernels at 16lb. a rupee | 4 11 0 | |
| | Sowing behind country plough and covering with brush harrow—¼ pair @ 0-12-0 a pair and 2 women @ 2 as. each .. | 0 7 0 | |
| | | | 5 2 0 |
| 4. | *After Cultivation.* | | |
| | Hoeing and weeding twice—24 women @ 2 annas each .. | | 3 0 0 |
| 5. | *Harvesting.* | | |
| | Mammootie digging—12 men @ 3 annas each | 2 4 0 | |
| | Stripping pods from vines and picking pods left out in the soil—60 men @ 2 annas each .. | 7 8 0 | |
| | Drying and cleaning—4 women @ 3 annas each .. | 0 12 0 | |
| | | | 10 8 0 |
| 6. | *Assessment.* | | 1 0 0 |
| | | | 29 14 0 |

Total cost of cultivation per acre for the rain-fed crop is Rs. 30-0-0 approximately.

*Value of the Produce.*

Yield of pods—1,200 lbs. per acre or 900 lbs. of kernels. Cost of

| | Rs. as. ps. |
|---|---|
| 900 lbs. of kernels @ Rs. 25/- per candy of 531 lbs. is = | 43 0 0 |
| Value of haulms, 2000 lbs. @ 1000 per rupee | 2 0 0 |
| Total cost of produce .. | 45 0 0 |
| Net profit per acre .. Rs. | 15 0 0 |

*Irrigated Crop*

| | Rs. as. ps. | Rs. as. ps. |
|---|---|---|
| 1. *Preparatory Cultivation.* | | |
| Ploughing four to six pairs @ 10 annas a pair (including the one for covering the manure) .. | | 3 12 0 |
| 2. *Manures and Manuring.* | | |
| Cost of 10 cart-loads of manure @ 6 annas a cart-load .. | 3 12 0 | |
| Carting charges for two carts @ Re. 1 each .. | 2 0 0 | |
| Spreading manure—6 women @ 2 annas each .. | 0 12 0 | |
| | | 6 8 0 |
| 3. *Seeds and Sowing.* | | |
| Cost of 64 lbs. of kernels @ 16 lbs. a rupee | 4 0 0 | |
| Forming beds and sowing .. | 2 6 0 | |
| | | 6 6 0 |
| 4. *After Cultivation.* | | |
| Hoeing and weeding—32 women @ 2 as. each | 4 0 0 | |
| Irrigation—12 times at Rs. 2\|- each | 24 0 0 | |
| | | 28 0 0 |

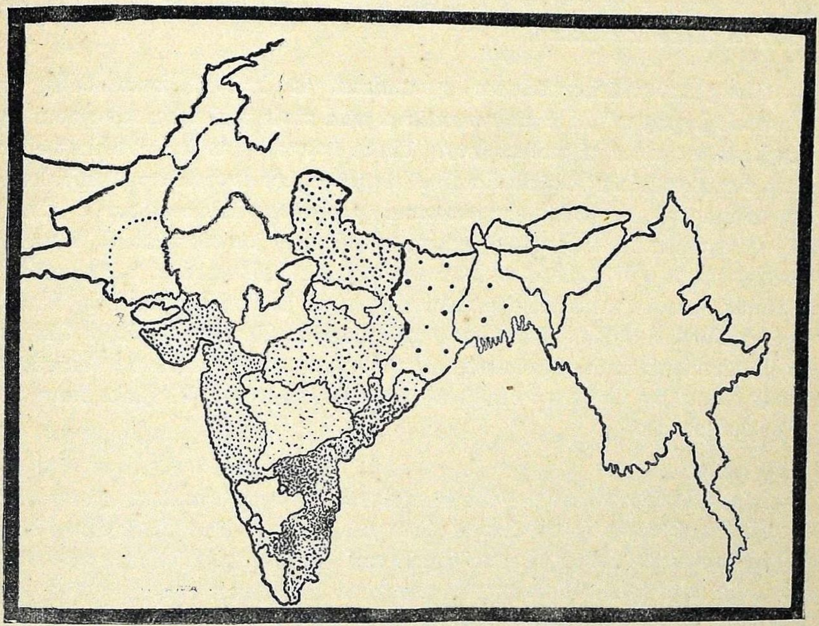
| | | |
|---|---|---|
| 5. *Harvesting.* | | |
| Mammootie digging—16 men @ 3 annas each .. | Rs. as. ps.<br>3 0 0 | Rs. as. ps. |
| Stripping pods and picking pods from the soil—100 women @ 2 annas each .. | 12 8 0 | |
| Drying and cleaning—8 @ 3 as. each | 1 8 0 | |
| | | 17 0 0 |
| 6. *Assessment.* | | 2 0 0 |
| | | 63 10 0<br>or<br>64 0 0 |

*Value of the Produce*

| | |
|---|---|
| Yield of pods—2,400 lbs. per acre or 1,800 lbs. of kernels. Cost of 1,800 lbs. of kernels @ Rs. 25/- per candy of 531 lbs. | 86 0 0 |
| Value of haulms—4000 lbs. @ 1,000 lbs. per rupee .. | 4 0 0 |
| Total value of the produce .. | 90 0 0 |
| Net profit per acre on the irrigated crop | 26 0 0 |

*N.B.* :—The price of groundnut in calculating the value of the produce was taken to be Rs. 25. It should be borne in mind that the ruling price is only about Rs. 19.

MAP OF INDIA SHOWING THE DISTRIBUTION
OF GROUNDNUT ACREAGE



## Section II

## THE ACREAGE OF CULTIVATION

The groundnut of commerce is known by several common names, such as peanut, earthnut, chinese-nut and l'archidaeu. In India and other countries where it is grown, it is differently known in the vernacular languages by names which are merely translations of one or the other of those mentioned.

The plant which produces groundnut is known botanically as "Arachis hypogea." It is unknown in a wild state and its native country has been a matter of uncertainty. There is reason to believe, however, that it originated in tropical South America, since several species belonging to the genus Arachis are commonly found in that continent. There are other species of peanuts, among which may be mentioned "Arachis nambyquarae, Voandzeia subterranea, and Stylosanthis mucrowata." Arachis nambyquarae like Arachis hypogea, is freely found in Brazil. It is cultivated by the Nambyquarae Indians in Rondonia, Matto Grasso. It is surmised that peanut was first carried from Brazil to Africa by slave ships; by the same manner it was conveyed to Virginia from the African shores.

(a) *World acreage*†:—The important groundnut producing countries are India, China, United States, Senegal, Nigeria, French Sudan, Gambia, Dutch East Indies, Japan, Spain and Argentina. China comes next to India with two billion pounds per year. The nuts are grown in most parts of China but the chief producing provinces are Shantung, Kwantung, Honan and Chikli. Manchuria also produces large quantities of groundnut. Although a small podded variety was grown in China for a long period, her extensive peanut industry had its real beginning only by 1889, when Archdeacon Thompson, an American missionary, took four quarts of Virginia peanuts to Shanghai.*

† Vide Appendix: Table I.
* Vide "Vegetable Fats and Oils" by Jamieson. Monograph No. 58, pp. 132.

Next to China come the United States and Senegal in order of importance with annual average yields of over 700 million pounds of peanuts. In the United States the peanuts are grown throughout the southern states but commercial production is chiefly confined to rather limited areas.

The statistical data available for groundnut production for the years prior to 1914, are not satisfactory and complete. But judged from exports, the acreage and production were probably about one third of their post-war maxima.

With the close of the Great War in 1918, the cultivation of groundnut began to increase markedly. The acreage under groundnuts in those countries for which statistical information is available rose from an average of 6·6 million acres in 1924—1926 to an average of 9·8 million acres in 1930-32, showing an increase of 48·5%. In 1930-32 more land came to be utilized for the cultivation of groundnut, thus affecting the world total acreage. As compared with 1924-26, the acreage of cultivation in India had increased by 60% in 1930-32, owing to a greater variety of uses for which the produce came to be utilized during the interval. The next largest increase was noticed in U.S.A. where a rise of about 40% brought the average acreage during 1930-32 to 1·4 million acres. In the other countries the acreage of cultivation remained stable; none of them showed any decline.

Though there was a downward trend in India during the depression, soon an upward march was noticed, and it reached its maximum in 1933 contributing about 7,586,000 acres. After 1933-34 there was a retrograde step in this increase in acreage, but in 1937 it recorded 8,652,000 acres. Though complete figures for China are lacking, it has shown rapid strides in recent years in the cultivation of groundnut, recording nearly 3,686,000 acres. With a record of steady increase up to 1932, U.S.A. had a decline in 1933 with a gradual recovery extending to 1936. But 1937 recorded a slight decrease. After a fall in 1933, Senegal experienced a gradual rise up to 1936. In Argentina there was a steady increase and the figures show that there is a two-fold increase in 1936 when compared with the figures for 1930.

(*b*) *India** :—Historical records refer to the existence of the groundnut plant in India as early as the 16th century. As a commercial

* Vide Appendix : Table II.

crop it remained in darkness as late as the second half of the nineteenth century. Between 1850 and 1890 the area under cultivation is shown to have increased from 4000 acres to 275,000 acres. Thus within forty years the figures showed an increase of over sixty times. But the country was not fortunate enough to benefit by this prosperity, for a devastating plant disease vitally affected the crop and greatly reduced the output with a subsequent shrinkage in the acreage under cultivation. The repercussions of this visitation were keenly felt in subsequent years. But the introduction of a new variety soon after averted a catastrophe at the proper time. It not only resuscitated the cultivation but doubled the acreage under groundnut. As a result of it, the plant was cultivated over two million acres in 1914.

When the Great War broke out in 1914, the Indian groundnut trade received a set-back. Continental ports ceased to operate during that period, and Marseilles, the chief importer of groundnut was almost closed to the Indian exporter. Moreover, the scarcity of shipping space, higher freight and insurance charges, and exchange difficulties, increased the hardships of the exporter of the produce. Consequently, the area under cultivation of groundnut came to be reduced. In 1915-16 there was a fall in the acreage of cultivation under groundnut by nearly 700,000 acres from 2,144,000 in 1914 to 1,411,000 acres in 1915-16 in British India. The closing years of the war saw the area under cultivation of groundnut reduced to 1·7 million acres as compared with about 2 million acres in 1914-15 for British India.

*Area in thousands of acres.*

| *Year.* | | *Total acreage.* |
|---|---|---|
| 1914-15 | .. | 2,144 |
| 1915-16 | .. | 1,411 |
| 1916-17 | .. | 2,069 |
| 1917-18 | .. | 1,687 |
| 1918-19 | .. | 1,158 |
| 1919-20 | .. | 1,306 |
| 1920-21 | .. | 1,824 |

It took two years to recover the original position in acreage. From 1920-29, there has been a gradual rise in the acreage under cultivation with only slight interruptions in the case of British India. In 1929 the area under cultivation was about 6,436,000 acres for the whole of India, nearly thrice the pre-war average. The following figures will illustrate the trend of increase in the acreage:—

*In thousands of acres*

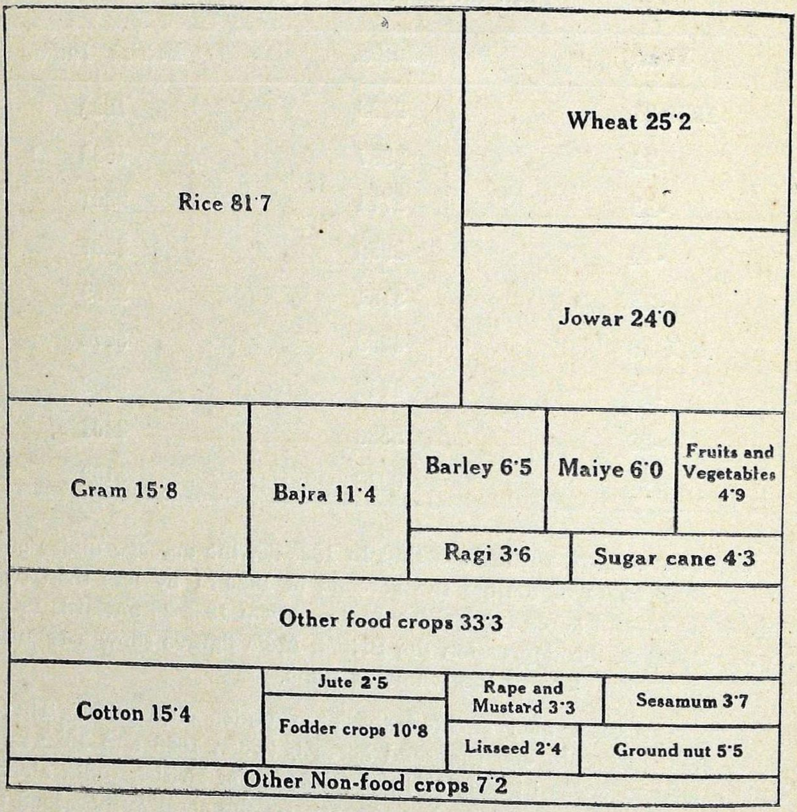
| *Year.* | *India.* | *British India.* |
|---|---|---|
| 1920-21 | 2323 | 1824 |
| -22 | 2367 | 1682 |
| -23 | 2774 | 2301 |
| -24 | 2958 | 2207 |
| -25 | 3181 | 2289 |
| 1925-26 | 4259 | 3474 |
| -27 | 4442 | 3493 |
| -28 | 5536 | 4401 |
| -29 | 6436 | 5102 |

The above figures illustrate that in 1925-26, the acreage under cultivation falls short of double the acreage of 1920-21 by less than two hundred thousand acres for British India. From 1925-26 onwards until the beginning of the depression the British India figures show a regular increase as in the case of the whole of India.

The depression also affected the area under cultivation. There was a fall of roughly 600 thousand acres between 1928 and 1929 and about a million acres in 1931-32 in the acreage of British India alone. But in 1933-34, with the beginning of recovery, the acreage increased to nearly six millions for British India and eight million acres for the whole of India.

The following table shows the trend of cultivation of groundnut for the years following the depression.

THE POSITION OF GROUNDNUT IN RELATION TO OTHER CROPS IN INDIA



*In thousands of acres*

| *Year.* | *India.* | *British India.* |
|---|---|---|
| 1929-30 | 5,700 | 4,558 |
| 30-31 | 6,014 | 5,323 |
| 31-32 | 5,081 | 4,306 |
| 32-33 | 6,887 | 5,488 |
| 33-34 | 7,586 | 5,948 |
| 34-35 | 5,163 | 4,016 |
| 1935-36 | 5,197 | 3,900 |
| -37 | 6,663 | 5,511 |
| -38 | 8,652 | 7,109 |

It may be interesting to note here that groundnut has been gaining in importance among oil-seeds throughout the period, 1913-34. Its share in percentage of the total oil-seeds raised including Sesame, Rape and Mustard, Linseed and other oil-seeds, is shown in the table below:—

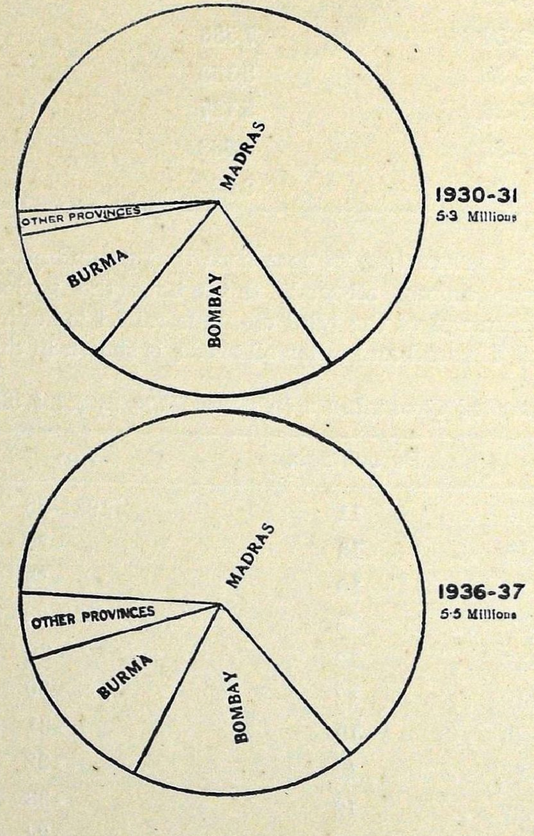
*Share of Groundnuts in percentage to total oil-seeds**

| *Year.* | *Percentage.* | *Year.* | *Percentage.* |
|---|---|---|---|
| 1913–14 .. | 11 | 1924–25 .. | 16 |
| –15 .. | 13 | –26 .. | 21 |
| –16 .. | 10 | –27 .. | 22 |
| –17 .. | 13 | –28 .. | 26 |
| –18 .. | 12 | –29 .. | 27 |
| –19 .. | 12 | –30 .. | 28 |
| –20 .. | 10 | –31 .. | 25 |
| –21 .. | 14 | –32 .. | 22 |
| –22 .. | 12 | –33 .. | 26 |
| –23 .. | 15 | –34 .. | 29 |
| –24 .. | 15 | | |

*Vide "Survey of Oil Seeds," Vol. III.

GROUNDNUT :

DISTRIBUTION OF ACREAGE



The table reveals how in a few years of prosperity preceding the depression, groundnut has been successfully displacing the other oil-seeds. It may be pointed out that from 10% in 1919-20 and 16% in 1924-25 it rose up to 28% in 1929-30. The pictogram in the adjoining page illustrates the position groundnut occupies among the crops raised in British India.

(*c*) *Madras Presidency*§:—Of all the groundnut producing centres in India, Madras occupies the premier position, contributing about 60% of the total production. A review of the statistical tables will clearly show how there has been an increase in the average area under cultivation. From 1·8 millions in 1914-15, it increased to 3·77 million acres in 1938-39. Thus while there is a marked increase in the area under cultivation, relatively speaking, *i.e.*, when compared with total acreage, Madras has been periodically experiencing serious fluctuations. The following table will clearly show the truth of the above statement.

*Area under groundnut crop in Madras and percentage to total area under oil-seeds.*

| *Year.* | *Madras Presidency.* | *Percentage.* | *Total acreage in India.* |
|---|---|---|---|
| 1920-21 | 1,599,738 | 45·7 | 2,323,000 |
| 21-22 | 1,459,122 | 43·2 | 2,367,000 |
| 22-23 | 1,754,334 | 49·3 | 2,774,000 |
| 23-24 | 1,807,353 | 50·5 | 2,958,000 |
| 24-25 | 1,904,119 | 50·8 | 3,181,000 |
| 25-26 | 2,598,609 | 57·8 | 4,289,000 |
| 26-27 | 2,680,156 | 59·7 | 4,442,000 |
| 27-28 | 3,336,536 | 63·6 | 5,536,000 |
| 28-29 | 3,679,349 | 66·7 | 6,436,000 |
| 29-30 | 3,209,315 | 64·3 | 5,700,000 |
| 30-31 | 3,575,157 | 67·1 | 6,014,000 |
| 31-32 | 2,635,427 | 59·5 | 5,081,000 |
| 32-33 | 3,516,679 | 64·8 | 6,887,000 |
| 33-34 | 3,779,365 | 67·0 | 7,586,000 |
| 34-35 | 2,350,934 | 58·0 | 5,163,000 |
| 35-36 | 2,519,965 | 60·0 | 5,197,000 |
| 36-37 | 3,495,023 | 67·0 | 6,663,000 |

§ Vide Appendix: Table III.

The importance of Madras in the field of the cultivation of groundnut is seen "illustrated on page 16." The West Coast being a moist tract with heavy rainfall is suitable for wet cultivation. In the eastern districts, the rainfall being comparatively low, dry cultivation is generally adopted. As such the eastern parts of the Presidency, running from the Chilka lake to Tinnevelly, raise the major portion of the dry crop. Moreover, the soil here is not so hard as in the West Coast. The East abounds with loose sandy loam while the West Coast contains hard laterite. Since groundnut cultivation requires loose soil, it is grown in abundance only to the East of the Western Ghats. A review of the crop report clearly shows that South Canara contributes only 25 acres while the Eastern districts like Coimbatore, South Arcot and Bellary, contribute respectively 189,442, 425,725 and 247,894 acres in 1938-39.

Of all the districts in the Presidency, South Arcot stands unique as the largest producer of groundnut. It is followed by North Arcot, Kurnool, Anantapur and other districts. During the years 1914-18, the cultivation of groundnut in this Presidency had a set back. It went as low as 1,136,142 acres in 1915-16. But after the war of 1914-1918, the total acreage of cultivation began to increase and before the depression, the figure was 3,336,536 acres (1927-28), three times the 1915-16 level. The depression period seriously affected the raising of the crop resulting in a fall to 2,635,427 acres in 1931-32. Soon the cultivation was revived and with a slight set back in 1934-35, the rise continued and touched the peak of nearly 4,657,596 acres in 1937-38. Moreover, the produce came to occupy 67% of the total oil-seeds grown in this presidency.

(d) *South Arcot District:*—Groundnut occupies the foremost rank as the dry crop of this district, contributing to the major portion of the produce in this presidency. The largest areas under groundnut cultivation lie in Tindivanam, Tirukoilur, Villupuram, Cuddalore and Vriddhachalam taluks.

As long ago as 1800, Mr. Buchanan travelling across the Carnatic found groundnut being raised in the Mysore plateau. In 1851, the Collector of South Arcot in one of his despatches to the Revenue Board observed that the groundnut crop was a profitable one and already it had taken root in Panruti and Villupuram. Continuing, he said that 3000 acres were being brought under the cultivation of groundnut in

Panruti and 1000 acres in Villupuram taluk.* Slowly and steadily, it gained strength and by the closing years of the last century, it displaced indigo, which till then occupied a premier position. Slowly it spread from Tindivanam to the lands south of Gadilam. From there it spread to Vriddhachalam and finally to Kallakurichi.

Though at first the area under groundnut remained constant, it dropped suddenly in 1896-97 to 88,000 acres, and in 1897-98, to 52,000. The yield per acre slowly decreased thus causing heavy losses to the cultivators. Soon the cultivators began to realize that the prevalent variety had deteriorated and only a new variety would save them from utter ruin and poverty. The exhaustion of the soil and the appearance of numerous plant diseases resulted in further lowering the yield. To the rescue of the cultivators came Parry and Co., who introduced a new variety from Mauritius which bettered the situation. The crop then entered a new phase; and the area under cultivation rose to 133,000 acres in 1889-1900 and reached the maximum of 343,000 acres in 1902-1903.

During the War of 1914-18, South Arcot experienced a downward trend in the cultivation of groundnut which came down to 299,035 acres in 1915-16. But the end of the war saw an increase of 20% in the cultivation. The recovery continued till it reached its peak of 482,978 acres in 1928-29. When the depression set in, there was a shrinkage in the cultivation of groundnut. In the subsequent years there was a slight fall but recovery soon set in and the cultivation reached its zenith in 1937-38, contributing nearly 471,274 acres or nearly 1.6 times the pre-war acreage.

Though there has been an absolute increase in the area under cultivation, there has been a fall as regards the percentage of area under the crop. In 1930-31 the percentage area under groundnut to the total cultivated area was 29 but it slowly went down in 1934-35. Later it rose to 28 per cent in 1938-39. The following table clearly gives the trend.**

* Vide "South Arcot District Gazetteer."
** Details regarding other districts are given in the Appendix: Table IV.

| *Year.* | | *Percentage of area under groundnut to total area.* |
|---|---|---|
| 1930-31 | .. | 29 |
| 31-32 | .. | 22 |
| 32-33 | .. | 22 |
| 33-34 | .. | 25 |
| 34-35 | .. | 19 |
| 35-36 | .. | 24 |
| 36-37 | .. | 28 |
| 1938-39 | .. | 28 |

SECTION III

## PRODUCTION

### (a) *World.**

Though groundnut has been in existence from very early days, production figures are far from satisfactory prior to the Great War (1914-18). The production figures after 1918 really show a phenomenal increase. Along with this increase in the area under cultivation there has been an increase in total production.

Countries of the British Empire alone account for two-thirds of the world production. India produces about three million tons of groundnut on the undecorticated basis or about one-half of the World's output. China, French West and Equatorial Africa come next, producing about one million tons respectively. It is double the estimated production of British West Africa or the United States of America. Senegal provides more than one-half of the production of French West and Equatorial Africa, while Nigeria accounts for three quarters of the production of British West Africa.

Between 1924 and 1930 production figures rose from 2·7 to 3·8 million tons. The Indian production which was 1·4 in 1924 slowly increased to 2·8 million tons in 1928. The subsequent year saw a sudden fall to 2·4 million tons followed by an increase to 2·5 million tons in 1930. As regards production, Senegal showed a steady increase between 1924 and 1930 recording 0·4 million tons in 1924 and 0·5 million tons in 1930. In U.S.A. the production figures rose from 0·3 million tons in 1924 to 0·4 million tons in 1929. But in the following year the figure dropped to 0·3 million tons; whereas, in Argentina, the production figure which was 0·1 million tons remained constant till 1929, subsequently there was a fall to 0·06 million tons in 1930. Similarly, in the Netherlands East Indies the production estimate which was recorded at 0·2 million tons remained constant till 1930.

After 1930 there was a general fall in the production of groundnut. Almost all countries excepting a few recorded a decrease in the total

* Vide Appendix: Table V.

output. India, the premier country in the production of groundnut, showed a fall from 2·5 million tons in 1930 to 2·1 million tons in 1931. In the same manner, Gambia which recorded 0·07 million tons in 1930 showed a fall to 0·06 million tons in 1931. In Senegal there was a rapid decrease from 0·5 million tons in 1930 to 0·1 million tons in 1931. Likewise, East Indies and Argentina showed a net decline.

Contrary to the above phenomenon, Tanganyika and U.S.A. showed an increase in the total output, while the production in Burma remained constant. In Nigeria the production rose from 0·1 million tons in 1930 to 0·2 million tons in 1931, while in Tanganyika the figure rose from 0·2 million tons to 0·3 million tons in the same period. Similarly, U.S.A. recorded an increase in the total output from 0·3 million tons in 1930 to 0·4 million tons in 1931.

In China, there has been a steady increase in the output since 1931. From 1933, Chinese production increased by leaps and bounds. By the end of 1937, it has been recorded that the production approximately equalled that of India.

(b) *India.**

The following figures clearly record the increase in yield in India after the War of 1914—18 till the beginnings of the depression. This upward trend is noticeable throughout, the output decreasing at intervals.

*Total production of groundnut,* 1919 *to* 1928.

*In thousand tons.*

| *Year.* | *Total Yield.* |
|---|---|
| 1919 | 822 |
| 1920 | 1,022 |
| 1921 | 959 |
| 1922 | 1,236 |
| 1923 | 1,084 |
| 1924 | 1,485 |
| 1925 | 1,999 |
| 1926 | 2,046 |
| 1927 | 2,718 |
| 1928 | 3,119 |

* Vide Appendix: Table VI.

A perusal of the above table will illustrate the uniform upward trend after 1923. With an abrupt rise in 1920, the production fell to 959 thousand tons in 1921. The year 1922 saw an increase which was continued till 1928 with a fall only in 1923. The output reached its maximum in 1928 contributing 3,119 thousand tons. Compared to 1929, the average total output for the depression period 1929-32, fell from 3119 thousand tons to 2274 thousand tons.

*Total Production of Groundnut.*

*In thousand tons.*

| Year. | Total production. | |
|---|---|---|
| | All-India. | British India. |
| 1929-30 | 2,180 | 1,948 |
| 30-31 | 2,592 | 2,252 |
| 31-32 | 2,151 | 1,765 |
| 32-33 | 2,846 | 2,353 |
| 33-34 | 3,186 | 2,473 |
| 34-35 | 1,740 | 1,333 |
| 35-36 | 2,114 | 1,655 |
| 36-37 | 2,714 | 2,110 |
| 37-38 | 3,501 | 2,640 |
| 38-39 | 3,196 | 2,250 |

The above table reveals that in All-India as well as in British India the same tendency has been felt as far as production is concerned. During the depression era there was a set-back in the Indian production. In 1929-30 the total output showed a net decline in production amounting to 29 per cent of 1928. But in the following year the production increased to 2,592 thousand tons. This increase was only temporary, for in 1931 there was a decline by 17 per cent of the previous year's figure. From 1932 the output began to increase till 1934 when a fall in production took place. Subsequent years saw an increased production which reached its maximum in 1937-38 recording 3,501 thousand tons. But in 1938-39 production began to fall.

As regards British India, the same conditions existed. With a slight fall in 1931-32, the yield began to increase till 1934-35 when a great fall was recorded. This downward trend did not last long, for by 1935 production began to increase and touched its peak in 1937 amounting to 2,640 thousand tons. But the tendency to fall continued and 1938 figures amply prove this statement.

The Native States too are producers of groundnut. Though at first the Bombay States were producing negligible quantities, in recent years their production figures have risen to the level of Hyderabad. Prior to 1934 Mysore was producing a negligible quantity, but the 1938 figure proves that groundnut has come to stay in that State.

Besides the total output, we must see whether there is an increase or decrease in the yield per acre.* A scrutiny of the table appended below will show how there was a tendency for higher yield in the pre-depression period.

*Average yield per acre.*

(In lbs.)

| Year. | | | Yield per Acre. |
|---|---|---|---|
| 1919 | .. | .. | 1,161 |
| 1920 | .. | .. | 1,076 |
| 1921 | .. | .. | 1,002 |
| 1922 | .. | .. | 1,052 |
| 1923 | .. | .. | 867 |
| 1924 | .. | .. | 1,153 |
| 1925 | .. | .. | 1,127 |
| 1926 | .. | .. | 1,061 |
| 1927 | .. | .. | 1,122 |
| 1928 | .. | .. | 1,124 |

* Vide Appendix: Table VII.

The end of the War of 1914-18 saw an increase in the yield per acre. But in subsequent years there was a decrease which continued till 1922 when the yield per acre increased to 1,052 lbs. In 1923 the yield per acre decreased to 867 lbs. From 1924 the yield has been almost steady with slight fluctuations.

The following table gives the yield per acre in lbs. for the years 1929-30 to 1938-39.

| Year. | Yield per Acre in lbs. | | |
|---|---|---|---|
| | Provinces. | Native States. | All-India. |
| 1929-30 | 1020 | 577 | 943 |
| 30-31 | 1104 | 588 | 990 |
| 31-32 | 1044 | 669 | 948 |
| 32-33 | 1076 | 647 | 965 |
| 33-34 | 1052 | 688 | 941 |
| 34-35 | 888 | 512 | 758 |
| 35-36 | 1045 | 623 | 911 |
| 36-37 | 1021 | 666 | 912 |
| 37-38 | 950 | 726 | 883 |
| 38-39 | 927 | 706 | 848 |

From this table it will be seen that in 1930 the yield per acre for All-India, increased to 990 lbs. as compared to 943 lbs. in 1929. But in 1931 it showed a decline with a recovery in the following year. In the next two years a gradual fall was noticed which touched as low a figure as 758 lbs. in 1934. But during the years 1935 to 1937 there was an increase but subsequently there was again the downward trend.

As regards the Provinces, the yield per acre had at intervals its set-back as well as recovery. With an yield of 1,020 lbs in 1929, it increased to 1,104 lbs in 1930. Next year there was a fall followed by a rise in the subsequent year. The lowest yield per acre was noticed in 1934-35. As a general feature it can be observed that the rise and fall occur in alternate years.

Though the yield per acre displayed a tendency to decrease in the Provinces, the Native States showed an increase. In Hyderabad the rate of yield rose at a rapid rate. In Mysore though the output was poor prior to 1933, it has improved since 1938.

(c) *Madras Presidency.*

Among the principal tracts that raise groundnut, Madras stands foremost. As figures prior to 1919 are incomplete and unsatisfactory, one has to start with the figures for the year 1919 as the basis for further comparison and study.

*Total production in Thousand tons.*

| Year. | | | Total Output. |
|---|---|---|---|
| 1919-20 | .. | .. | 569 |
| 20-21 | .. | .. | 740 |
| 21-22 | .. | .. | 678 |
| 22-23 | .. | .. | 823 |
| 23-24 | .. | .. | 744 |
| 24-25 | .. | .. | 948 |
| 25-26 | .. | .. | 1,264 |
| 26-27 | .. | .. | 1,207 |
| 27-28 | .. | .. | 1,671 |
| 28-29 | .. | .. | 1,830 |

With the cessation of hostilities in 1918, the groundnut production began to increase. The above table shows that in 1919, the production was 569,000 tons. Soon an upward trend was noticed and the figure touched its peak in 1923 contributing 823,000 tons. In the following year there was a decrease in production. From 1924, there was a phenomenal rise which lasted till 1928 when it reached its maximum of 1,830,000 tons.

This prosperity did not last long for the depression era soon set in. In this period groundnut production was hit hard. The following table bears out the point.

*Total production in Thousand tons.*

| Year. | | | Total Output. |
|---|---|---|---|
| 1929-30 | .. | .. | 1,522 |
| 30-31 | .. | .. | 1,765 |
| 31-32 | .. | .. | 1,234 |
| 32-33 | .. | .. | 1,729 |
| 33-34 | .. | .. | 1,777 |
| 34-35 | .. | .. | 920 |
| 35-36 | .. | .. | 1,202 |
| 36-37 | .. | .. | 1,657 |
| 37-38 | .. | .. | 2,059 |
| 38-39 | .. | .. | 1,613 |

In 1929-30 the production was low. But in subsequent years there was a rise followed by a fall in 1931-32. Though there was a trend towards increase in '32-34, there was a drop in '34-35. From 1935-36 production began to increase and it reached its maximum in 1937-38 with a setback in 1938-39.

Regarding the yield per acre, Madras has had to experience many vicissitudes, and this can be inferred from the following table.

| Year. | | | Yield per Acre in lbs. |
|---|---|---|---|
| 1919-20 | .. | .. | 1,114 |
| 20-21 | .. | .. | 1,036 |
| 21-22 | .. | .. | 1,041 |
| 22-23 | .. | .. | 1,051 |
| 23-24 | .. | .. | 922 |
| 24-25 | .. | .. | 1,115 |
| 25-26 | .. | .. | 1,089 |
| 26-27 | .. | .. | 1,009 |
| 27-28 | .. | .. | 1,122 |
| 28-29 | .. | .. | 1,114 |

With a fall in 1920-21, an upward trend was noticed in subsequent years but a sudden drop occurred in 1923-24, recording as low as 922 lbs. per acre. In 1924-25 there was a recovery with a fall in 1925-26; and the revival which followed lasted till 1927-28 when it was 1,122 lbs. per acre; but in the following year the figure went down to 1,114 lbs. per acre.

When the depression set in, a fall in the yield per acre resulted.

| Year. | Yield per Acre in lbs. |
|---|---|
| 1929-30 | 1,062 |
| 30-31 | 1,107 |
| 31-32 | 1,107 |
| 32-33 | 1,101 |
| 33-34 | 1,056 |
| 34-35 | 877 |
| 35-36 | 1,068 |
| 36-37 | 1,062 |
| 37-38 | 990 |
| 38-39 | 958 |

In the year 1929 there was a fall in the yield per acre compared with the previous year's figure. But in the following year it increased and remained constant for the subsequent years. But in 1934-35 the yield per acre fell to 877 lbs. In the following year a sudden rise was noticed which lasted till 1936. But there was a noticeable fall from 1938 onwards.

In South Arcot, the same tendencies prevailed. After the depression period an increase in the yield per acre was witnessed. This lasted till 1933, when a drop to 918 lbs. was recorded. The following year saw an increase to 1,008 lbs. per acre; but it did not last long, for in 1935 it fell to 986 lbs. The susequent years showed a downward trend which went as low as 795 lbs. per acre in 1938. The following table gives the changes in the yield per acre.

| Year. | | | Yield per acre in lbs. |
|---|---|---|---|
| 1930-31 | .. | .. | 974 |
| 31-32 | .. | .. | 997 |
| 32-33 | .. | .. | 997 |
| 33-34 | .. | .. | 918 |
| 34-35 | .. | .. | 1,008 |
| 35-36 | .. | .. | 986 |
| 36-37 | .. | .. | 918 |
| 38-39 | .. | .. | 795 |

## SECTION IV

# AGRICULTURAL RESEARCH AND GROUNDNUT CROP

Let us examine in this section the improvements suggested and carried out by the Agricultural Department. To ensure economic cultivation and enhance productivity new varieties have been introduced by the Agricultural Department. In order to carry out this purpose, a research station mainly intended for the promotion of cultivation in oil-seeds, has been started at Tindivanam. Recently the Imperial Council of Agricultural Research made a grant to this station to intensify the study of the problems connected with groundnut cultivation. The grant was to be spread over a period of five years. The new scheme began its work on 22nd January, 1937.

Let us now see the various experiments conducted by them in different spheres of groundnut cultivation. At first the question regarding the selection of a variety best suited to withstand drought, engaged their attention. Several trials were made and it was found that the bunch varieties were comparatively less resistant to drought than the spreading varieties.

Various bunch varieties were tried and the result was that the "Gudiyattam bunch" and "Small Japan" were found to be fairly resistant to drought while those with four seeded pods and red testa were badly affected. Among the spreading varieties, the "Virginia Runner" (A.H. 7) and "Local Pondicherry" (A.H. 72) were outstanding in their high degree of powers of resisting drought. A selection from "Bassi" (A. H. 477) was found to be well suited for dry areas.

Secondly, selections of the best variety in the bunch as well as the spreading types were tried, keeping a standard variety as control for each.

*Bunch Type.*

| Treatments. | | Adjusted yield per acre. | Percentage of general mean. |
|---|---|---|---|
| A.H. 32 (Control) | .. | 951 lb. | 94·2 |
| A.H. 1320 | .. | 993 | 98·4 |
| A.H. 1537 | .. | 1043 | 103·4 |
| A.H. 1581 | .. | 1077 | 106·8 |
| A.H. 1589 | .. | 1128 | 111·8 |
| General mean | .. | 1009 | 100·0 |

*Spreading*

| Treatment. | | Calculated yield per acre in lb. | Percentage of general mean. |
|---|---|---|---|
| A.H. 25 (Control) | .. | 1249 | 107·0 |
| A.H. 554 | .. | 1171 | 100·3 |
| A.H. 718 | .. | 1179 | 100·9 |
| A.H. 731 | .. | 1163 | 99·6 |
| A.H. 678 | .. | 1222 | 104·6 |
| General mean | .. | 1168 | 100·0* |

The foregoing analysis clearly shows that as regards the bunch variety, (A.H. 1581 and A.H. 1589) selections from "Tennessee White" and "Improved Spanish" respectively record a significant increase over the control. While in the spreading, the control, A. H. 25 "Saloum," shows a remarkable yield.

Experiments conducted to ascertain the preliminary yield per variety showed that A.H. 334, a selection from "Carolina," stood unique,

*Vide "Report of the Madras Agricultural Research stations," 1938-39. "Tindivanam Research Station Report."

in that it gave a significant increase of 13·3 per cent over the improved variety (A. H. 25), which, in turn, showed an increase of 26·8 per cent over the local variety.

The effect of climate and soils on groundnuts was also studied and it was found that the selected varieties yielded more than the "local Mauritius." A. H. 477, a selection from "Bassi," gave the maximum increase of 50 per cent. The high degree of drought resistance coupled with its enhanced production will render it a suitable variety for tracts with low and precarious rainfall.

Regarding manure, experiments were conducted. It has been found that potash gives an increased yield. Nitrogen as Ammonium Sulphate affects the yield in the absence of the basal dressing.

Since the groundnut crop is raised as a mixed one with a cereal, workers in the field were engaged to find out a plausible mixture which will bring a higher net return when groundnut is cultivated as a mixed crop than when it is raised as a pure crop. As such, plots were laid out wherein pure as well as mixed cultivation were conducted and the results noted. Whether such mixed cultivation affected the quality of the pods produced, was also noted.

| Treatment. | No. of kernels per lb. | Shelling percentage. |
|---|---|---|
| Pure | 974 | 70·4 |
| + Redgram .. | 954 | 71·6 |
| „ + Castor .. | 952 | 70·4 |
| „ + Thenai .. | 967 | 70·1 |
| „ + Cotton .. | 970 | 70·9 |
| „ + Cumbu .. | 986 | 70·7 |
| „ + Cholam .. | 970 | 71·6 |

From the above we can very easily conclude that mixed cultivation does not change qualitative characteristics.

*Profit as per Pure and Mixed Variety*

| | Net profit per acre. | Duration of the crop. |
|---|---|---|
| Groundnut pure .. | Rs. 10 13 5 | 4½ months. |
| " + Cumbu .. | " 0 14 1 | " |
| " + Tenai .. | " 6 10 0 | " |
| " + Cholam .. | " 21 3 10 | 5½ months. |
| " + Redgram. | " 17 13 4 | " |
| " + Castor .. | " 24 4 3 | 8 months. |
| " + Cotton .. | " 17 0 3 | 8 months. |

From a purely monetary point of view, it is always advisable to grow the crop along with castor, since it brings a maximum return. Recently it has been said that mixed cultivation with castor affects the oil content of the groundnut seed. No substantial experimental evidence is, however, forthcoming.

*The Order of Yield per Acre*

| | | |
|---|---|---|
| Groundnut Pure | .. | 1036 lb. of pods. |
| " + Redgram | .. | 975 " |
| " + Castor | .. | 903 " |
| " + Tenai | .. | 828 " |
| " + Cotton | .. | 813 " |
| " + Cumbu | .. | 721 " |
| " + Cholam | .. | 580 " |

To test the effect of electro-culture on the groundnut crop, an experiment was made in Tindivanam, with A.H. 32. Before scrutinising the results, let us see what electro-culture means and how it is applied to plant life.

Dr. S. S. Nehru, I.C.S., conceived the idea of harnessing electrical energy and utilising it for plants as a stimulant. He harnessed cosmo-radio-magnetic energy and applied it towards the growth of the plant. Its results are astounding and far-reaching. It has been more

widely known and practised in Western and Far Eastern countries than in India, the land of its birth.

By electro-culture is meant the stimulation of the already existing electrical energy in the plant. Like other living organisms plants too are made up of cells. Each cell has its own nucleus surrounded by protoplasmic matter. As long as the cell pulsates with life, electrical energy resides in it. In other words, where there is cellular activity, there is electrical activity and *vice versa*. A rise or fall in the cellular activity results in a corresponding increase or decrease in the electrical energy. If there is an inducement in the form of an external stimulus to the electrical activity of the plant, it will automatically increase the growth of the cell and subsequently the whole plant to which the cell belongs. This is the basic idea underlying electro-culture.

Though electricity is a boon to humanity, its utilization in the vegetable kingdom in a simple manner is due to the undaunted perseverance of Dr. S. S. Nehru. Once costly machines were required to carry out the experiment; but Dr. Nehru has invented such simplified devices that they are within the reach of the poor Indian cultivator. The instruments are so cheap that the poorest villager can buy them, and so simple that the dullest head can operate them. They are to Dr. Nehru what the charka and the carding bow are to Mahatma Gandhi. The radio-magnetic energy from the earth will be transmitted to the active regions of the tree so that more flowers and fruits result and a general enhanced growth is found. To supplement this process, Dr. Nehru recommends the irrigation of the plant by Agaskarised water (sparked water). To give further stimulation the weakened tissues are occasionally subjected to sparking. Before seeds are sown they are soaked in Agaskarised water and then broadcast in the field with India rubber gloves covering the hands. This in brief is the out line of electro-culture and its application to plant life.

The results are said to be remarkable and outstanding. Discussing the desirability of its application and its results, Colonel Noel, the Director of Agriculture, North Western Frontier Province, observes :—

"A method of increasing the yield which is extraordinarily cheap, simple and effective is that of electro-culture advocated by Dr. Nehru, I.C.S., of Mainpuri. This treatment has given the astounding result of a 30% increase in yield. The cost is negligible."

To test the efficacy of electro-culture in the cultivation of groundnut, experimental plots were laid out in Tindivanam. Growth measurements were recorded at monthly intervals. The perusal of the figures, showed, however, that growth was not accelerated, and flower production remained normal. The experiments were then discontinued.

*Pests and Diseases*

Many are the pests and diseases which retard the growth of the plant. They are :—

1. The red-hairy caterpillar,
2. The surul poochi,
3. Wilt,

and 4. Clump.

(1) *The red-hairy caterpillar* (*Ansacta Albistriga*) :—It is a familiar pest in most parts of South India. It is a common feature in red sandy soils soon after the rains. These caterpillars appear in such large numbers when the crops are young that wholesale destruction inevitably results. Usually, this pest attacks most of the rain-fed crops.

If the crops are young when this pest appears, there will be a total destruction; and a resowing of the crop may become necessary. But if the crops are somewhat older, the attack is partial. Flowers are easily susceptible to this attack and when attacked the plants flower again, but a substantial reduction in the total yield is certain.

Various measures have been suggested to ward off this pest. The following are a few. Hand-picking of the moths is one method. As the visitation continues in the same tract from year to year, the farmers can fairly know that the pest has not completely disappeared but lurks in the soil and reappears when the rain sets in. The first rains change the pupae of this caterpillar to moths which will be found sluggishly moving in the field. These moths can be easily distinguished by their white pigment and sluggish habits. Being sluggish, they can be easily picked. Each moth is capable of laying a 1,000 eggs; but efficient hand-picking will prevent their further occurrence.

It is not possible to collect all moths and some may have missed the workers' attention. So, as soon as the eggs are laid it is best that they are collected ; for no sooner the eggs hatch than the caterpillars get scattered.

One other means of warding off the pest is by the collection of pupae and their destruction. During the time of pupation, caterpillars resort to shady places such as the bases of trees or fences near by. With a little experience it will be easy to find them out.

As a further procedure, trenching can be undertaken. When the caterpillars emerge, they appear in legions. To destroy them by spraying disinfectants, is costly. As such, trenches are dug across the path of these caterpillars which march from the infested to the uninfested field. The caterpillars drop into the trenches and they are collected and destroyed.

Regarding the handpicking of moths, the expenditure usually comes to Rs. 2 per acre. "At the time of harvest, statistics of yield of cumbu and groundnut were taken in the area hand-picked as well as in the areas left untreated. There was an average yield of 256·4 Madras measures per acre in the case of pure cumbu fields and 161·5 Madras measures in the case of cumbu sown mixed with groundnut in the area treated, whereas the figures for the same class of crops in the untreated areas were 104·1 Madras measures and 80·1 Madras measures respectively; thus indicating a gain in money value of about Rs. 25 and Rs. 13½ per acre. As such the ryot can very well afford to spend Rs. 2 or more to prevent the loss."*

(2) *Surul Poochi* (*Stomopteryx Nerteria*) attack can be mitigated by the use of light-traps maintained in dark nights to catch the moths.

(3) *Wilt*:—This is a bacterial disease which attacks the plant and retards its growth. To thwart repeated attacks relative resistence experiments were conducted. Many were the selections tried. 'The mortality due to wilt varied from 2·2% in A.H. "Virginia bunch Tanganyika" to 15·2% in A.H. "1722 Florida IV." The "Gudiyattam bunch" too showed an infection of 6·0% while the "Virginia running peanut" and the "Rangoon" variety recorded a high percentage of mortality.'**

Manurial experiments in Tindivanam were carried out to mitigate this wilt attack. Potash was found to a certain extent a feasible antidote

*Vide "Dept. of Agriculture," Leaflet No. 23.
**Vide "Report of the Agricultural Research Stations," 1938-39.

to this disease. Experimental plots have been laid out at present to ascertain when the maximum mortality of the plant due to this disease occurs. The experiments may suggest ways to minimise the wilt attack.

(4) *Clump* is caused by fungus and is of the nature of a virus. It stunts the growth, and affects the production of flowers. The terminal buds get twisted and the leaves begin to curl inwards. This disease attacks the roots of the plant. Experimental measures are being tried to mitigate the disease.

### *Quality of the Groundnuts*

The quality of groundnuts exported from Madras, is not valued by foreign importers on the ground that "Coromandel" variety contains more fatty acid than others. Since groundnut forms about 30% of the exports of Indian merchandise, the exported varieties should be improved in quality. "The Indian Trade Commissioner at London has estimated a loss of about 52 lakhs of rupees to Madras on account of the poor quality of groundnuts."

The poor quality of the nuts is due to the presence of a high percentage of free fatty acids. Both the oil and free fatty acid are interrelated. When the free fatty acid increases in the nut, the oil content simultaneously decreases. The cost of extracting oil increases when there is a higher percentage of free fatty acid content. The oil extracted from such nuts is further of a lower quality and hence it fetches a low price in the market.

Of the causes that contribute to the higher percentage of free fatty acids in "Coromandel" nuts, the first is that farmers, in order to avail themselves of the higher price prevailing in the market, begin harvesting before the nuts are mature. This pre-mature harvest causes the retention of a higher percentage of free fatty acids in the kernels. The harvest of groundnuts even one week before the kernels are fully ripe is said to double the quantity of free fatty acid and reduce the oil content of the kernels by about four per cent. In some places the nuts are harvested two or three weeks before they are fully mature. To minimize the period of growth, the bunch variety can be grown instead of the spreading type as the bunch variety takes lesser time to mature than the spreading one. Immature kernels when dried get

shrivelled and contain less oil and more fatty acid unlike the mature kernels.

When the pods are shelled, they are wetted even when decorticated. Damping increases the fatty acid content and lowers the quality of the nuts.

"Assuming the price of groundnut kernels containing not more than 2·5 per cent of free fatty acids is Rs. 30 per candy of 531 lbs. and supposing that the Madras groundnut on reaching Europe is found to contain 4 per cent of free fatty acids, only Rs. 27 will be paid instead of Rs. 30, Rs. 3 being the discount on account of the extra 1·5 per cent of free fatty acids. If the produce contains 8 per cent free fatty acids, as is not very uncommon, the price to be paid will be Rs. 19 instead of Rs. 30."*

To improve the quality and reduce the free fatty acid content, the wetting which now precedes shelling should first be avoided. Without wetting the produce, decortication can be carried on as is done in Bombay and the Ceded Districts.

The deterioration in quality is also due to improper storage and insufficient drying. The harvested crop contains as much as twenty-five per cent of moisture and the buyers undervalue the product owing to the presence of moisture. Moreover, if the nuts are not properly dried soon after harvest, moulds begin to appear inside the kernels and increase the acidity. After the moulds have once appeared, it is difficult to remove them even after drying. So the produce should be well dried soon after harvest.

Again, the produce should be dried well so as to make the nuts brittle; then only it should be stored. Otherwise, when it is packed in gunnies and stored in godowns, it undergoes fermentation. When partially dried kernels are exported, they undergo fermentation in the ship's hold and when they reach the destination, a higher percentage of acidity will be noticed. Thus the producer, hand in hand with the exporter, should see that the produce is well dried before export in order to obtain a higher value for Indian groundnuts. It is also desirable to set up a separate trade for lower grades of nuts.

*Vide Dept. of Agriculture, Leaflet No. 83.

(*b*) *Seed.*

The varieties that are prevalent in this district, are the bunch and the spreading varieties. South Arcot grows only the spreading type, while in the adjoining districts the bunch variety is used.

The local Mauritius (A.H. 1) is the common variety grown in this district. Commercially, it is known as "Coromandel" or "Mozambique". This is the type that has widely spread in this presidency. It belongs to the spreading type. With small pods having one to two seeds, the plant takes 130 days to mature. Unlike the improved variety the "Coromandel" is small with a rose coloured testa.

In the adjoining districts of Chingleput and North Arcot the bunch variety commonly known as the "Gudiyattam Bunch" (A.H. 32) is cultivated. It is otherwise known as "peanuts or khandeish," with a shorter maturing period, running to 100 days. Like the local Mauritius, the pods are small with one to two seeds. The kernels are light rose and plump.

The other cultivated variety is "Small Japan" (A.H. 34) or commercially known as "Red Natal" or "Pollachi Red" or Lal Boria as it is called in Bombay. Belonging to the bunch type, it takes 105 days to mature. Though the pods are small, they are plumpy and contain two seeds of reddish colour. It is cultivated in the Pollachi taluk of the Coimbatore District.

Besides the cultivated varieties, new and improved varieties have been launched by the Agricultural Department after due trials in their farms. Among the improved varieties, A.H. 25 "Saloum" stands foremost. It has been taken from a mass selection of the West African variety. Its yield is 25% more than the local cultivated variety and is a good drought resistant. As such, it has taken hold in the southern districts of Madras Province and also the Ceded Districts. The pods of this type contain two and occasionally three seeds. The kernels are medium in size, rosy and somewhat plump. The duration of this plant's growth is 135 days.

Three selections from "Bassi" (A.H. 685, A.H. 678, A.H. 698) have been tested to find out the feasibility of their growth in this province. They have good resistance and stand well even severe drought. These selections are of the spreading varieties with occasional three seeded pods. The pods are very small with rounded tips unlike other types

which have beaks at one end. The kernels are small, rounded and rosy and not plumpy. Their yield is significantly higher than the local:—

| | | |
|---|---|---|
| A.H. 685 | .. | 27·5% over the local. |
| A.H. 678 | .. | 26·2% do. do. |
| A.H. 698 | .. | 35·5% do. do. |

*Analysis of Various Varieties.*

(Rain-fed crop)

| *Cultivated Variety* | | | |
|---|---|---|---|
| | A.H. 1. | A.H. 32. | A.H. 34. |
| Average acre yield of pods. .. | 1150 ℔. | 1050 ℔. | 800 ℔. |
| Shelling percentage .. | 77 | 76 | 78 |
| Oil content .. | 49·8% | 48·2% | 49·5% |
| Number of kernels per ℔. .. | 1250 | 1400 | 1156 |
| Free fatty acid .. | 1·22% | 0·35% | 0·40% |

*Analysis of Various Varieties*

(Rain-fed crop.)

| *Improved Variety* | | | | |
|---|---|---|---|---|
| | A.H. 25 | A.H. 685 | A.H. 678 | A.H. 698 |
| Average acre yield of pods .. | 1460 ℔. | 1453 | 1578 | 1538 |
| Shelling percentage | 73 | 78·4 | 77 | 77·6 |
| Oil content .. | 50·4% | 49·7 | 49·2% | 49·8 |
| Number of kernels per ℔. .. | 1025 | 1135 | 1111 | 1126 |
| Free fatty acid .. | 0·25% | 1·39% | 1·4% | 3·36% |

Section V

## FROM THE CULTIVATOR TO THE EXPORTER

Groundnut is an important commercial crop of the South Arcot District and it occupies 25% of the total area harvested in each year. Since nearly 80% of the groundnut area is under rain-fed conditions, the vicissitudes of seasonal conditions make the crop a precarious one. The uncertainty of the crop very often becomes further aggravated by uncertain prices brought about by fluctuations in demand in the foreign countries which consume more than 70% of the local production. Like their brethern in the field, the groundnut producers in South Arcot are as a class poor. Largely on account of their need for money and partly on account of the pressure brought to bear on them by middlemen, the growers exhibit a great rush for sale in the harvest seasons. The produce changes hands many times before it is finally shipped to foreign countries from ports like Cuddalore and Pondicherry.

The chain of middle-men can be diagramatically represented as follows:—

Producers
|
Petty dealers in villages
|
Village dalals
|
Shed-men ——————┐
|
Traders in the ports
|
Exporting Firms ←——┘

As soon as the harvest is over, many of the cultivators who are in general poor and have no means to convey their produce to market centres, sell it in their own villages. The village dealers buy the produce at rock bottom prices. Being in need of money owing to the several disbursements he has to make, the cultivator disposes of the produce at any price that is quoted by the village dealers.

Besides the growers of the crop, the labourers in the villages too contribute their mite to the trade. As the labourers are paid in kind, they get their necessaries by selling the nuts to the village dealers, who waylay them on their way home and induce the workers to part with their produce for ready cash. The prices offered are, however, so low that there is no relationship between such retail prices and the market rates. Further, the purchases are made in volume; and the measures used are so faulty as to deceive the poor labourers. Tempted by a few coins shown to him in the evening when the urge of the toddy shop is great, the poor labourer falls an easy prey to the greedy village merchant.

The village dealers thus securing enough of the crop, bring it to the market centres. On their way are situated the sheds of the buying traders who are known by the name of shedmen. The shedmen employ men to direct sellers to their sheds. The purchase of both shelled and unshelled nuts is undertaken. After decortication they transport the produce to the market centres. To ensure the even flow of the crop to their sheds, they advance loans to the nearby villagers who raise the crop. When the harvest season is over, the shedmen go to the villages and quicken the sales of the crop in order to buy it at a low price.

The practices of some of the shedmen in weighing the produce may be noted here. But many of the practices described below were in vogue before the inception of the market committee. After its inauguration, radical changes have not taken place; but it has checked to a certain extent fraudulent weighment.

When the villager brings his cart-load of goods, the shedmen offer high prices which at times will be above the rate prevalent in the market. Tempted by such high prices, the villager consents to dispose of his produce and it is taken out for weighment. Innumerable are the men employed to unload the cart and for weighment. The work is done so quickly that the seller finds it difficult to watch the proceedings. Sometimes the seller is given a generous offer of a few annas for meals, tiffin and *pan* and sent out when weighment is done. As all the growers are not illiterate, some of them insist upon weighment in their presence. When they insist on this, they are duped in a different way. In order to please them, the buyer weighs some of the bags with the stamped weight, and after the first bag is weighed, the stamped weight is taken away and the bag previously weighed, serves the purpose of

weight for future weighment. When the other bags are weighed the buyer secretly places some big stone or weight by the side of the bag or even into it covering the top afterwards with groundnut. Thus for each weighment the seller is made to lose a great deal and in the end there is a great disparity between the weight calculated by the grower and the weight announced by the buyer. The seller is thus duped. Forced by circumstances, the grower sells the produce to the shedmen.

The shedmen decorticate the produce if it is unshelled and then send it to the market centres. Big traders who are contracting agents to the exporting firms, get into touch with the shedmen. The shedmen sell the produce to the traders as well as to the exporting firms for ready cash. The traders instead of being godown keepers are occasionally owners of oil presses as well as expellers. They deal in "katcha" as well as in "pucca" goods.

To keep up a continuous flow of produce, the traders advance loans to the village middlemen as well as to the growers of the produce. Being without sufficient capital, they borrow small amounts from sowcars and try to do a tremendous volume of business by selling to the exporters. To secure adequate capital, the local traders borrow sums at exhorbitant rates of interest and the burden is transferred ultimately to the ryot. The need to repay loans within very short periods and the desire to make large profits, induce heavy selling pressure allowing little time for proper cleaning, drying and grading of the produce. The quality of the produce is thus allowed to deteriorate in the process.

The advancement of loans by traders to the ryots has shown a downward trend in recent times owing to the passing of the Agricultural Debt Relief Act, and to the starting of the Market Committees.

As soon as the produce enters the go-down, it is weighed and spread out in the sun for drying. "Chittals" (labourers) are engaged to pick out the blacks from the spread out produce at a wage rate of three pies per Madras measure. (A bag of groundnut is approximately equivalent to 75 Madras measures). When the black ones are picked, the rest of the produce undergoes processing and is then filled in bags and sold to the exporting firms. The black kernels are in demand by the local oil mills who by extracting an inferior groundnut oil mix it up with castor oil to be utilized as lubricant. This oil of inferior quality is also used by temples for lighting purposes. Traders in the interior of the district bring the produce to the port and deliver it to the exporting firms, F.O.R.

It is regrettable that till recently such a great producing centre of groundnut as South Arcot had no traders' association. The emergence of the market committee opened new vistas. The traders of Cuddalore Old Town evinced a great interest in starting an association of their own to further their trade. A few educated people took the initiative and their labour was rewarded. On 26th September, 1940, the association was registered under the Societies' Registration Act 1860. The objects of the association are:—

1. To further the interests of the traders of the commercial crop in all branches of their activites and get adequate facilities for the efficient prosecution of the trade.

2. To hold meetings once in a month, wherein experts should be invited to deliver lectures regarding the groundnut trade.

3. To help the needy and the poor out of the fund set apart for charitable purposes and

4. To open free reading rooms for the public.

The association has done useful work in suggesting a revision of the existing contract forms and also the creation of a standard grade of seed.

Leaving the traders, we now meet the exporting firms to whom the traders sell the groundnut. In Cuddalore as well as Pondicherry, there are branches of three exporting firms. The following table shows the total quantities of groundnut exported from Cuddalore and Pondicherry from 1935 to 1938.

*Statement Showing the Shipping of Kernels at the Ports* (in Tons)

| Year. | | Total |
|---|---|---|
| | (a) *Cuddalore.* | |
| 1935 | .. | 68,147 |
| 1936 | .. | 92,513 |
| 1937 | .. | 104,291 |
| 1938 | .. | 102,563 |
| | (b) *Pondicherry* | |
| 1935 | .. | 49,877 |
| 1936 | .. | 63,658 |
| 1937 | .. | 94,476 |
| 1938 | .. | 53,590 |

The above table clearly shows the premier position occupied by Cuddalore in exporting groundnut to foreign countries.

The exporting firms buy only shelled nuts and buy them even if they are in the raw condition; but they quote prices for "pucca" quality only. The "Katcha" nuts were in great demand when Marseilles was importing Indian groundnut. With the stopping of exports to Marseilles the exporting firms rarely go in for "Katcha" produce. These firms never advance loans like the contracting traders; instead, they enter into contracts with only those having good will. Moreover, in the interior of the district, the exporting firms have their own agents who get the produce and send it to the port.

With the exporting firms, transactions of three classes are entered into. They are:—

(*a*) Forward contracts.

(*b*) Unfixed contracts.

(*c*) Spot transactions.

By forward contract is meant a particular system of contract entered into by a middleman with an exporting firm, for the supply of a particular number of bags, either machine-shelled or hand-beaten, before a particular date and at a fixed rate which is accepted by both the seller and the exporting firm. This kind of contract is adopted when the price is not steady and it is usually the middlemen that enter into forward contracts with the exporting firms.

Besides this fixed contract, there is another system of contract called the "unfixed contract." They are not so common as the fixed contract, for they are used only when prices are shooting up. In the unfixed contract system the price alone is not fixed while other items are specifically stated in the form. The seller brings, say, a 1000 bags on a day to the exporting firm where he gets 80% of the price of the produce at the day's prevailing rate. The price for the whole lot is not fixed. Hoping that the future price will be favourable to him, the seller waits. If the price is rising, the firms, however, keep quiet. But when they find a fall in price, the buying firms have a right to call on the seller to recoup the difference. On a particular day, if the price suddenly rises, the seller asks the firm to fix up that day's price for his produce, the buying firm may tell him, "I have instructions to buy to-day only a thousand bags; as four other sellers wish to have prices fixed to-day, I can accept

only a fifth of your quantity." The seller has to be satisfied. If the price goes down the next day, the seller stands to lose heavily. In Salem where this unfixed contract system prevailed, a time limit of 2 or 3 months was fixed. The seller was called on to fix the price at the end of the stipulated period. The clever sub-agent in many cases so manipulated prices as to keep them low and cause loss to the seller. Owing to the prevalence of this system, many families in South Arcot have met with utter ruin and poverty.

In the spot transaction, the produce, whether "Katcha" or "Pucca," when brought by shedmen or traders, is examined and weighed. The price is fixed after determining its quality. Such spot transactions are few in the case of the exporting firms and generally the contract system of buying is in vogue.

When the produce is brought, test weighment is done. Later, a refraction analysis is made for determining the quality, and the price is paid according to the quality. Soon after the refraction analysis, the produce is stored in a long go-down roofed usually with corrugated metal sheets. Since ventilation is necessary, enough space is left between the walls and the bags. The floor of the godown is spread with sand and on it a coir-mat is placed. As the produce is easily affected by change of weather, the groundnut crop is stored only in bags and not in bulk. If the storage is prolonged, the quality of the nuts deteriorates. After two months a kind of insect called the weevil affects the nuts, reducing them to powder. To combat effectively this insect, fumigation has been suggested; but this is very costly. Other methods of checking the insect are engaging the attention of the Entomologist.

On the shipping day a few bags are test weighed and sent on board. Before shipment the refraction analysis is again made in order to ascertain the quality of the produce shipped.

Before the war, the groundnut was exported to Continental ports like Antwerp, Rotterdam and Hamburg as well as to England. At present, owing to the closure of foreign markets, London alone is importing Indian groundnut.

For loading, unloading and other sundry work, labourers are recruited on a contract basis. From a survey it has been found that the following approximate wage rate prevails at Cuddalore.

*Schedule of Wages*

| | |
|---|---|
| Unloading from wagons and stacking them in the go-down. (This includes test weight and sampling charge) | From Re. 1-0-0 to 0-12-0 per 100 bags (approximately). |
| Removing from the stack, pouring it out, drying, refilling the bags and stitching. | Rs. 3-4-0 per 100 men. |
| Picking out the blacks from the nuts | 3 to 4 pies per Madras measure. |
| Sieving | 0-8-0 per 100 bags. |
| Weighing before shipment | Re. 1-4-0 per 100 bags. |

It has been observed that the middlemen take away the major portion of the growers' profit. Even in this war-time the grower loses heavily. This can be seen when we examine the course of prices from its progress from the village to the port. At present the only foreign market that consumes Indian groundnut is England; and the Food Ministry purchases it at £10 per ton, F.O.B. port. Deducting the incidental charges, one candy of 531 lbs. will give the ultimate seller Rs. 28. The following transactions clearly indicate the loss sustained by the grower.

"(About 520 Madras measures of unshelled kernel give about a candy of clean shelled nut.)

(1) The village dalal purchases from the growers for Rs. 10-8-0 per candy of 520 Madras measures.

(2) The town broker purchases for Rs. 12-8-0 from the village dalal and pays a cart hire of 0-8-0 giving No. 1 a profit of Re. 1 and allowing a rupee for driage.

(3) The town merchant purchases from the broker at Rs. 14-8-0 and allows a profit of Re. 1-8-0.

He decorticates the same and pays 0-12-0 as charges including weighing, etc., and sells the same to contracting merchants at about Rs. 16-8-0 and earns a profit of Re. 1-4-0.

(4) The contracting merchant sells to exporting firms at about Rs. 20 and incurs Railway and loading charges of about Rs. 2-4-0 and thus gets a profit Re. 1-4-0.

(5) The exporting firm is to pay for gunnies, godown charges, interest and loading charges which may amount to about Rs. 2, but still he may gain about Rs. 8.

In the above chain of transactions, the producer gets Rs. 10-8-0 and the ultimate purchaser pays Rs. 30. The expenses of marketing comes to Rs. 5-8-0 for all the items shown above and a profit of Rs. 14 is shared by various middlemen. 125 per cent of what the producer gets for his labour, seed and other charges, goes to middlemen even in this war-time when there is glut in the market with a price lower than the normal."*

To maximise the income of the grower and minimise the intrusion of the middlemen, co-operative marketing has been suggested. The inception of the marketing committee has to a great extent enabled the grower to get the maximum price for his produce. The poverty of the village growers proves an impediment in getting the just price for their produce. To efface the middlemen completely is not possible and their existence in the chain of marketing is not injurious if well regulated. Unless the marketing of the produce is done in co-operation with the Co-operative Department, the growers will find the same difficulty which faced them before the inauguration of the market committee. Credit facilities along with warehousing should be extended to the growers. The central problem in rural economy is the ware-housing question. As such, the market committee should not only see that the growers get a fair price but also extend credit and go-down facilities to them with the help of the Co-operative Department.

*Vide "Marketing of Groundnut," Madras Journal of Co-operation, March, 1941.

## SECTION VI

# CO-OPERATIVE MARKETING

In India the *laissez-faire* policy had a long lease of life even in marketing as it had in other spheres of economic activity. The present chaotic condition is the result of interaction of various socio-economic forces. In medieval days agriculture and cottage industries maintained an equilibrium which came to be upset at the emergence of modern industrialism. Though improved means of communication have brought access to the villages, their influence has not been great enough to make the village a well integrated system in the national economy. The village artisans who were enjoying patronage under the village organisation became bewildered at the onward march of industrialism. Agriculture came to be commercialized and the new methods in marketing practice went counter to traditional practices. Thus with no change in his mental or moral sphere, the farmer has come into contact with the world market. This condition has been aptly described by the Agricultural Commission as follows :—" His interests have in the main been left to the free play of economic forces, and they have suffered in the process. For he is an infinitely small unit as compared with distributors and consumers of his produce who, in their respective fields, become every year more highly organized and more strongly consolidated." Thus it is observed that with no commensurate change, the farmer drifts from the medieval system of economy to the modern. Therefore it is of immediate necessity that we should evolve a system out of the nebulous rural marketing of old.

Since agriculture dominates Indian economic life, the importance of a rational system of marketing cannot be over-estimated. The farmer gets such a low income that it hardly suffices the daily necessaries of his life. As such he has to fall a prey to indebtedness.

To relieve him from indebtedness and enable him to get a fair price for his produce, a perfect system of marketing is invaluable. Let us examine the implications of rural marketing. Firstly, difficulties in marketing stand in the way of production, for without adequate consumption continued production will jeopardise the economic equilibrium. Secondly, marketing

and production should be so related that the maximum price should reach the hands of the producer. Unless the producer gets a fair price, there is no guarantee that he will produce the same goods. Thirdly, the absence of such correlation will restrict consumption. The more organized the market, the lower will be the price of the products and accordingly the greater the advantage to the consumers from a given money income. Fourthly, the present system of marketing involves a colossal waste to the country. Improved marketing will increase the total wealth of the country. Fifthly, the development of industries needs a regular supply of raw materials. If raw materials are not supplied regularly, industrial advancement will be hampered. Lastly, we find a disparity between the price the producer gets for his product and the prevailing rate in the market. This is the crux of the problem. The price the producer gets is low because the cost of services involved in the process of distribution is disproportionately high. To make this expenditure reasonable and to enable the primary producer to get the maximum share of the price which the ultimate consumer pays, is the main problem.

As a proper remedy presupposes careful diagonosis, a study of the chaotic condition of rural marketing is essential to any scheme of improvement.

The village producer suffers in marketing owing to the dislocation caused by the impact of modern industrialism on rural economy. His difficulties can be traced to three inter-connected factors. "The producer has to sell his produce at an unfavourable place, and at an unfavourable time for unfavourable terms of price." Place, time and terms are the three prime factors that contribute to the ills of the present marketing system.

The village producer generally disposes of a good part of his produce in his own village. He sells to the sowcar, the bania, the prosperous landlords or the agents of the wholesale merchants. Regarding linseed, for instance, it has been estimated that the All-India average of the percentage taken to the market for sale by cultivators themselves, is only 20% as against 40% of the produce sold by the landlords. The reason for such a procedure is his indebtedness. The cultivator usually mortgages his crop for the loan he has taken for raising the crop. As soon as the harvesting is over, the sale of the produce is made in the field itself. In cases where such pledges are not made, the pres-

sure brought to bear upon the producer by the creditor sowcar is such that he is compelled to dispose of his produce on the threshing floor.

The second important factor which is responsible for village sales, is the lack of communication with the nearest market. Many of the villages lie far away from trunk roads and feeder roads are few. Even if there are feeder roads, they are so ill-kept that it will be risky to use them for transport. At times the producer has no carts to carry his produce to the market. In some places, soon after the harvest of one crop is over, the sowing operations for another crop are begun and the cultivator can ill spare the time to go to the market.

Even when a producer reaches the market after overcoming these disabilities before the produce is actually sold, he has to face, as the Report on the Marketing of Wheat observes, a host of unwelcome agents. "the Kacha arhatya, the Dalal, the Charhava who fills the scale pan, the the Arhatya's clerk, the Chaukidar, the sweeper and a horde of beggars of every description."

In these markets arbitrary deductions are made for religious and charitable purposes. The agents of the buyers draw out large quantities as sample. The sales are conducted by the agents of the buyer and the seller through code words which are not understood by the cultivator. Very often the actual settlement takes place outside the market, and if disputes arise over it, the buyer often wins.

The element of time is an essential factor as regards perishables, like vegetables and fresh fruits. To market them successfully, rapid communication is essential. Since the producers sell their produce as soon as the harvest is over, a glut in the market occurs. The prices fall, affecting the producer's money income. If the distribution of the produce is done judiciously, a fair price can be had for the producer. This the producer cannot do as long as he is weighed down by debts. As such, financial aid for the producer is an essential factor. One of the ways of improving the marketing facilities of the producer is by an organised system of co-operative marketing.

We have already noted that the producers prefer to dispose of their produce in the village rather than take it to the market owing to the existence of the innumerable middlemen. To eliminate the middlemen as far as possible and to secure a reasonable price for the produce, the co-operative method of marketing has been

suggested. Mr. V. L. Mehta in submitting his memorandum to the Royal Commission on Agriculture has observed: "In the sphere of agricultural marketing it has been found that arbitrary imposts have occasionally been abolished, proper stocking of goods for better prices facilitated, and, especially in respect of the sale of cotton, the advantages of sale in wholesale markets and of proper prices for imported varieties secured. Co-operative supply agencies have conferred the benefits of proper weighments, purity of goods, and wholesale prices to those who deal with them." Co-operative marketing has developed business habits among agriculturists.

A co-operative sale society can easily eliminate the intermediaries and can have direct dealings with the mofussil purchaser. Co-operation offers one of the best means through which the producer can get the full market price for his produce. Efficient Consumers' Societies will also effectively eradicate middlemen.

Only in the last decade, the Agricultural and Co-operative departments came to realise that through their co-ordinated effort rural marketing can be effectively organized so as to bring prosperity to rural India. Co-operative marketing has now made some headway in India. Burma led the way by inaugurating paddy sale societies, and Bombay, the Central Provinces and the United Provinces have followed her example.

Though there was a remarkable advancement as regards the sale of cotton in Bombay, the movement was not without difficulties. It had to face mismanagement, absence of hold on members and inadequate finance. So the Agricultural Commission put forth the strong plea for making it a powerful organisation to fight against vested interests. The Central Banking Enquiry Committee recommended that as far as finance was concerned the provincial governments should advance liberally to the co-operative banks at concessional rates of interest for the development of co-operative sale societies.

Besides cotton, other products like groundnut, gur, tobacco, chilly and arecanuts came to be dealt with by these sale societies. In the Madras Presidency, soon after the war of 1914-18 such sale societies came into existence. Some of them not only sold the produce on behalf of their members but also gave cultivation loans. The more important societies are "The Tirupur Cotton Sale Society," "The Koilpatti Sale

Society," "The Central Sale Society," at Cuddalore and "The Tiruvannamalai Loan and Sale Society."

In this study of the marketing of groundnut, an account of the history of the *Central Sale Society at Cuddalore* and its activities may be of interest. To enable the ryot to get a fair price and to make marketing efficient, the Central Sale Society was registered on 22nd June, 1935. It began to function on the 11th October, 1935. The Society had under its jurisdiction the South Arcot District and the Udayarpalayam Taluk in the Trichy District. The membership of the Society is open to individuals as well as to Societies. With a paid up share capital of Rs. 4,834-5-0, the Society was allowed to borrow up to a maximum of five times the paid up share capital plus the reserve. The Society was managed by seven members elected by a general body. The members of the board were elected yearly.

The object of the Society was, firstly to advance loans on the pledge of produce; and in this work the Society was partially successful. Secondly, it had to arrange for the sale of the produce of members to the best advantage. This privilege was extended even to non-members. Thirdly, it was to act as the agent of the members in the matter of receiving for safe-custody in its godowns or elsewhere the produce pledged in the co-operative societies. This object was never put into practice.

In 1931, it was found that the marketing of groundnut was slowly declining; and endeavours were made to resuscitate the market. The Registrar of Co-operative Societies, assisted by the Director of Agriculture and the Assistant Director of Agriculture had an extensive tour of South Arcot to explore fresh avenues in order to prop up the market. As a result of this tour, the Central Sale Society was asked to open warehouses at Cuddalore Old Town, Tirukoilur and Vriddhachalam. Agricultural demonstrators were put in charge of the warehouses at Tirukoilur and Cuddalore Old Town while the Vriddhachalam warehouse came under the supervision of a Co-operative inspector. In January, 1938, at Villupuram, a warehouse which was already run by the Valavanur Sale Society was taken up by the Central Sale Society and a Supervisor was appointed to look after the business.*

* See Appendix: Table VIII.

The Central Society engaged no middlemen. The ryots used to bring their produce direct to the Society. As soon as the groundnut laden cart arrived, information was sent to the members who were the usual buyers. The buyers sent their agents to inspect the produce and fix up the price; and the bid was done through secret ballot. The maximum price was availed of by the ryot.

As soon as the sale was effected, the purchase money was paid to the ryot less commission charged for handling. If a loan had been advanced it was deducted from the sale proceeds. Sometimes there might be delays of a few hours or a few days in obtaining the sale money causing some difficulties for the ryot; and the co-operative warehouses had no ready cash to help him. In Cuddalore the cash credit facility was allowed by the Central Co-operative Bank; but the warehouse officer could not take advantage of this facility. However, the purchasers here often were known to pay promptly.

In the Co-operative warehouses, besides the commission on sales neither go-down rent nor sundry charges are levied. The cooly charges are borne by the sellers. In the case of groundnuts there is no insurance charge levied as is invariably done in the case of cotton, but a commission of four to six annas per Candy is charged on the sales.

The weights used by these sale societies are standard weights and a candy is equivalent to 531 lbs. The produce is not graded or standardized before selling but it is sold outright.

In order to help the ryots to obtain a fair price, godown facilities are given; but the storage facility is not adequate for stocking large quantities.

The Co-operative Department launched a controlled credit system so as to aid cultivation which the Government also support through Takkavi loans. The ryots, however, usually spend beyond their means, and continue to be in debt. Any aid co-operative Societies give the ryots would be useful only if the Societies can help in its proper utilization.

To make co-operative marketing popular with the ryots and to induce them to sell their produce through the sale societies, the agricultural demonstrators along with a special non-credit inspector made extensive propaganda in the district. But soon they were withdrawn

as a measure of retrenchment. With the bringing into force of the amended Madras Commercial Produce Marketing Act in South Arcot and the opening of market yards at Villupuram, Vriddhachalam, Tirukoilur and Cuddalore Old Town, the usefulness of the Sale Society slowly and steadily began to diminish, with the result that it is now under liquidation.

To fetch a fair price and eradicate the existence of middlemen it has been observed by well-known co-operators that the sale society should buy the produce outright and pay sufficient advance to the ryots, and adjust the same as soon as the produce is sold at the port.

## SECTION VII

# REGULATED MARKETS IN INDIA

Regulated markets in India were in existence as early as 1897 when the Berar Cotton and Grain Markets Law was passed. This law was promulgated by the Government of India for the "Hyderabad Assigned Districts" as Berar was then officially called. Moreover, the Municipal Act of 1903 of the Central Provinces empowered the municipalities to inspect and regulate the markets. Yet their progress was slow. When the Agricultural Commission investigated about marketing, there were regulated markets only in C. P. and Bombay. After a thorough investigation the Commission arrived at certain conclusions which should be studied before we proceed further.

As the Berar Law as well as the Bombay Act confined themselves to cotton alone, the Commission saw no justification to confine the Acts to cotton only but recommended that products other than cotton should also come into the orbit of the law.

Secondly, the municipalities and district boards should be kept out of the management of these markets. If a regulated market is under the jurisdiction of the local boards, the influence of vested interests would stand in the way of fulfilling the higher objects for which the market has been created. They will look only for revenue and erect market yards within the municipal limits without considering the difficulties of communication. As such, separate provincial legislation should be passed for establishing regulated markets.

Instead of leaving the initiative in the hands of local bodies, the provincial governments should launch a policy of starting markets and meet the initial costs.

Wherever there are markets controlled by the local boards, they should automatically cease to function when the regulated markets come into existence. To make up the loss sustained by local boards by such a closure of markets, they should be compensated by an annual contribution to be made by the regulated markets.

Regarding the constitution of the market committee, it has been said, that half of its members should be from the rank of the cultivators; and where necessary, to protect the interests of the growers, a member from the agricultural department could be included. Licensed brokers shall be prohibited to stand for election from the growers' constituency. The committee should be empowered to elect its own Chairman and Vice-Chairman. The co-operative society in the area should also have its representative on the board.

The market committee should see that its members are well informed about the market condition daily. Besides, as the Commission suggested, brokers should be strongly discouraged from acting both for the buyers and sellers, as in such cases, the broker had the "natural predilection to favour the buyer."

Lastly, the Agricultural Commission advocated storage accommodation and desired to utilize such markets for purposes of propaganda in favour of agricultural improvements and thrift.

The foregoing recommendations of the Commission had their desired effect. In the wake of such recommendations new acts came to be promulgated in various provinces. A brief survey of the regulated markets which came into existence in the last years of the third decade of this century is given below.

*Central Provinces*

As already indicated, markets in C. P. fall under two categories, *viz.*, regulated markets and markets controlled by local boards. Under the C. P. Municipal Act several markets are being run, of which Raipur, Drug and Nagpur are noteworthy. The market at Raipur has been from its inception controlled by the Municipality through its executive committee. No storage rent is charged for the first three days after which one anna per bag is levied. The chief commodity that is dealt in the market is rice. The market superintendent is the *de facto* executive head of the market. Disputes arising in the market are settled by him. But when no settlement is arrived at, a separate tribunal is created. Even when the tribunal fails, the executive committee settles the case.

All the operations in the market are either registered or licensed. The Dalals, measurers and coolies get registered and charges are levied

for handling. No octroi is charged for the sale effected in the market yard.

The Dalal serves as the intermediary in settling the transactions between the buyer and seller. All these transactions are entered in his book and finally scrutinized by the Market Superintendent to ascertain that the seller and the buyer are agreed about the price at which the produce is sold. "As soon as the agreement is reached the Dalal deposits Rs. 5|- per cart as earnest money on behalf of the buyer."

In the Drug market, methods of transacting business and of settling disputes differ from the Raipur market. As soon as the seller arrives at the market, he gets a receipt which he sticks into the spread-out produce. The buyers arrive on the scene and fix up the price. The name of the highest bidder is entered in the receipt book before the market superintendent. Then the auction takes place and the final settlement is arrived at. The name of the buyer is entered in the book and the earnest money is deposited on the spot. Disputes arising out of it are settled by a committee deputed by the municipality and if it fails, the President of the Municipality hears the case. Ordinarily disputes are settled within a day.

The markets operating under the C. P. Cotton Markets Act of 1932 deal only in cotton. The markets at Amraoti and Akola stand out in bold relief as regulated markets. The Amraoti market was started as early as 1872 under the control of the Municipal Board. Though it was conducted well, it did not form a well regulated market until the passage of the Act of 1897. Soon a committee was formed to look after the control of the market. Since the new market superseded the local board market, a financial agreement was arrived at by which the new market consented to pay the surplus revenue to the local body. The committee had five members, two of which were nominated by the Municipal board while the rest were the representatives of the traders in the locality. In 1932 when the Act of 1897 was amended the committee was expanded as follows. Out of the eleven members, four were elected by local traders, four by the cotton growers of the taluk, one was nominated by the Municipality and one was the representative of the local co-operative societies. The committee is empowered to elect its own chairman. Election of the members is to be done once in three years. The management and control of the market are vested with the market committee which in its turn is placed under the supervision and control of the

district officers. The Commissioner of the division is the final administrative authority.

The market yard has a good library with a radio for receiving news. The market committee which is solely responsible for the control of the market, has four sub-committees which respectively deal with disputes, audit, public works and the checking of scales and weights. There is a permanent staff at the head of which is the superintendent who supervises the work in the market yard.

"Buyers, dalals, and weighmen are all registered and licensed by the committee and have to pay an annual fee of Rs. 100|-, Rs. 60|- and Rs. 5|- respectively. The market charges are clearly defined and include Re. 1|- per cart for dalal, 0-1-6 ps. per cart for weighing and an anna per cart as market cess. In addition to these, the buyer pays 0–2–6 per cart as handling charges. The dalals usually pay 0–1–0 per cart for the local Dharmasala fund. Though the carts have free entrance to the market yard, a terminal tax of 0-15-0 per bale of lint is levied by the Municipality on all outward traffic either by rail or road."

Even though the amended act is a definite improvement on the former one, in the case of disputes it lacks rigorous enforcement. Usually the final settlement takes place outside the market yard when deductions are made by the buyer. The seller has no other recourse than to abide by it. Though the market committee has full legal powers to put an end to such transactions, it confines itself to collecting the cess due to it.

Like the Amraoti market, the Akola market was also re-organised in 1932. Its organisation and management are similar to that of Amraoti. One cardinal feature in it is that it prohibits brokers to act both for seller and buyer.

In 1935, an act concerning all agricultural produce was passed. It was amended in 1937. According to this, even the marketing of all agricultural produce except cotton comes under its purview. The market committee is constituted as follows. It has ten members of which five are elected by the agriculturists, one is the servant of the Crown of not less than the rank of a Naib Tahsildar, one nominated by the District Board, one by the Municipality and the rest are from the ranks of the traders. The management and control are similar to those of the cotton markets.

*Bombay*

In Bombay, an act was passed in 1927, which was subsequently amended in 1933 ; and its purpose was to regulate the sale in the cotton markets. According to this act, a market yard was opened at Dhulia in 1930. The market committee which is responsible for the control of the market has fourteen members including seven representatives of the growers, four of the local traders and one each of the Agricultural Department, the District Board and the Municipality. As in C.P., the market committee is controlled and supervised by the district revenue officers. Disputes arising out of the transaction are finally settled by a sub-committee, if the superintendent fails to arrive at a settlement in the first instance.

Buyers, dalals and weighmen are licence holders paying an annual fee of Rs. 10|-, Rs. 30|- and Rs. 5|- respectively. After the organisation of the regulated markets the market charges have decreased.

The prevalent market rates in Bombay, America and Liverpool are received by telegrams and are notified in the market yard. Though settling prices under cover is even now in practice, malpractice in scales and weights has been efficiently put an end to.

The Bailhongal market, though similar in constitution to the Dhulia market, differs in certain respects. Firstly, the produce is put into open auction and the final weighment and settlement of prices are done in the market yard. This effectively minimises disputes. No trader is allowed to transact without a licence within a radius of ten miles from the town of Bailhongal.

*Madras*

The object of the Madras Commercial Crops Market Act of 1933 with its amendment in 1939, is to secure the better regulation of buying and selling of commercial crops (cotton, groundnut and tobacco) and to establish markets for this purpose in the presidency. The act is administered through the Collector of the district. At first the notified area was Tiruppur, and later, South Arcot came under its purview.

Let us first briefly relate its working at Tiruppur and study in detail its operation in the South Arcot District in the next section. The Tiruppur market was first owned by the Municipality. In 1936, it came

under the regulated markets list with twelve members of which five are elected by the cotton growers, four elected by the licencees functioning in the market, one is nominated by the local board and the rest are the nominees of the Crown. The life of the committee is three years. The market is a decentralized unit, but the Government want to make it a centralized one in course of time.

The Market Committee elects its own chairman and carries on its functions through five sub-committees. As regards the staff, a novel departure has been made in appointing as secretary a senior Agricultural Demonstrator, in order to stabilize the market and ensure its efficiency in its initial stages.

The secretary of the committee receives information daily regarding the prevailing rates in Bombay, Liverpool, and New York, and notifies it duly. Since the market has no yard of its own, carts are directed to the ginneries where licensed weighmen weigh the produce.

The charges are as follows:—

(a) Brokerage 0-6-0 per candy of 784 lbs. of Kapas or 0-12-0 per candy of lint.

(b) Market cess of 0-4-0 per candy of 784 lbs. of lint and 0-3-0 per candy of Kapas.

If the seller fails to deliver the produce at the premises of the buyer, the seller has to pay an additional charge of 0-6-0 per candy.

Thus a market fund is created from the licence fees, market fees and other miscellaneous receipts. The total income during the two years 1936 and 1937 amounted roughly to Rs. 25,000; and nearly half of this was expended.

### *Hyderabad*

Unlike Bombay and Madras, Hyderabad deals in all agricultural commodities. This is a definite improvement, for the dealers can make up the loss sustained in the controlled commodity by widening their profit margin on commodities which are not controlled. A marketing section has been formed and the marketing officer is responsible for the administration of the Act. Already ten markets are operating under this Act.

The Raichur market which was constituted in 1339 Fasli, was first confined to the main bazar with a market cess of 0-1-0 per cart. Later the limits of the market area were extended to ten miles around the collectorate of Raichur. Though there was bitter opposition in the initial stages, later it came to stay through the patient and tactful propaganda of the Collector. The market is managed by a committee of twelve members, six of them being representatives of the growers, four from the rank of the traders, one from the local Municipal Board and another nominated by the Government. The board has to be reconstituted once in two years. To compensate the Municipality for the loss sustained by it by the creation of the regulated market, half the revenue is paid to the Municipality.

Though a sub-committee is in charge of the administration of the market, in reality it is the superintendent who looks after it. Licence fees are levied on the brokers, weighmen and measurers. Market charges payable by the seller and the buyer are specified. A special committee has been appointed to collect funds for charitable institutions. The terminal tax levied is 0-4-0 per cart entering the municipal area.

The *Warangal* market closely resembles the Raichur market, and in the first instance, even this market had to face opposition; but gradually it was overcome by the tactful work of the Collector.

### *Punjab*

The Punjab Agricultural Produce Markets Act was passed in 1939. The Act includes all agricultural produce, *viz.,* cotton, wheat, barley, rice, oil-seeds, maize, gram, sugarcane (gur and shakkar). The Act regards those who actually raise the crop as growers and excludes from its range brokers or dealers who dispose of the produce. Licence fees have been fixed with a maximum limit at Rs. 10.

The market has to be controlled by a market committee of not more than sixteen members, two of whom are to be nominated by the Government and the rest to represent the growers and the licence holders in the proportion of two to one. The weighmen, dalals and measurers should take out licences. The life of the committee is three years.

### *North-Western Frontier Province*

The Agricultural Produce Markets Act was passed in 1939 and it received the assent of the Governor-General on the 16th August of the

same year. Unlike other provinces it includes all produce of agriculture or horticulture, animals and their hides, skins and wool and any article of food or drink wholly or partially manufactured from agricultural produce. Here, the dealer and the broker, even though they may raise the produce, are excluded from the list of the growers of agricultural produce.

For every notified area, a market committee has been constituted with not less than ten and not more than sixteen members. Half the number are elected by the growers while the Government, the District Board and the Municipality each send one member. The rest have to be elected by the traders of the notified area.

The act makes every committee a corporate body with legal existence. Moreover, it prohibits the brokers from acting in any transaction on behalf of both the buyer and seller.

The market committees are allowed to have a fund created from the collection of licence fees, market cess and other miscellaneous items and permitted to defray their expenses from that corpus.

No trade allowance except the specified charges are allowed to be collected in the market, and private markets are prohibited to transact business in the notified area.

The above acts owe their existence to the deliberations conducted in 1938 at a Conference in Delhi of the Central Marketing Staff and of the senior marketing officers in Indian provinces and states. In this conference a model bill was drafted for the regulation of markets. Following the model of this bill, Punjab, North-Western Frontier Province, Bengal, Mysore and Travancore passed Acts suited to local conditions. The Bombay Act was amended to include crops other than cotton. The emergence of the regulated market is a new augury for the betterment of the masses and the rural prosperity of the land.

Section VIII

# MADRAS COMMERCIAL PRODUCE MARKET ACT—ITS WORKING IN SOUTH ARCOT

The South Arcot District was declared a notified area under Section 4 (1) of the Madras Commercial Markets Act 1933, from 1st April, 1939. Accordingly, a Market Committee was constituted under the caption "South Arcot Groundnut Market Committee." The members of the first committee were nominated by the Government. As the Secretary of the Committee, a subordinate of the Agricultural Department was drafted in after a few weeks training in the Tirupur Cotton Market Committee. Six superintendents of the market yards were also recruited from the Agricultural Department.

As soon as the Committee was formed, the framing of the bye-laws engaged their attention. At first the bye-laws were modelled after the Tiruppur Cotton Market Committee bye-laws. But later they were recast in the light of experience. The object of the bye-laws is to regulate the business in groundnut and conditions of trading.

The Market Committee has as its head the Chairman who convenes meetings which are held in the office of the committee once in two months. On the requisition of half of the members of the committee, a meeting can be convened. When urgent matters await the consideration of the committee, the papers relating to them are circulated among the members for perusal and opinion. The quorum in the case of the committee meeting is four.

The Market Committee consists of two sub-committees. They are:—

(a) Executive sub-committee,

(b) The Disputes sub-committee.

The Secretary of the Market Committee is the secretary of both the committees; and the chief executive officer convenes the meetings.

The Executive Committee is composed of four members, and these are:

(a) The Chairman,

(b) One elected from the ranks of the traders,

(c) One of the representatives of the growers and

(d) One nominated by the Committee.

These members are from among the members of the Market Committee. The Chairman of the Market Committee *ipso facto* becomes the chairman of the sub-committee. The quorum for each meeting is three.

The functions of the committee are to prepare the annual budget and suggest constructive programmes for the furtherance of the committee. It is their duty to see that the collection and dissemination of market intelligence are done efficiently. Any member of the committee can hear complaints regarding marketing practices and can bring the fact to the notice of the committee.

This committee met four times in 1939-40 and prescribed the forms as per the bye-laws and revised the bye-laws in the wake of experience.

As regards the Disputes sub-committee, it is composed of four members who are drafted in as follows:—

(1) One of the nominated members of the committee who acts as the chairman of the committee,

(2) One of the persons from the growers of the commercial crops on the committee,

(3) One of the members representing the traders of the commercial crop in the committee and

(4) One of the representives of the local body not being the chairman of the committee. If there is no other member from the local body, some other member of the committee is appointed.

The committee is intended to settle disputes, and the sub-committee appoints in each market yard a panel of not less than 12 but not more than 24 persons. Every person included is expected to have a knowledge of the trade.

When a dispute arises, the parties report it to the Secretary with the prescribed fee. Each party elects one arbitrator from the panel constituted by the sub-committee. When the arbitrators fail to arrive at a settlement, an umpire is appointed who is also chosen from the same

panel. As a final appellate tribunal there is the Disputes sub-committee whose decision is final. Every session of the sub-committee is presided over by the chairman and in his absence by a member chosen from the members of the sub-committee. At least three members are required for the quorum. The sub-committee records the disputes that come before them. Though this sub-committee was ushered in, as there were no disputes in 1939-40, it had no occasion to meet.

To start with, the South Arcot Groundnut Market Committee got a loan amounting to Rs. 7,700 from the local government. "The total revenues of the committee during the year 1939-40 amounted to Rs. 71,294-7-6 of which Rs. 40,016-6-10 has been spent and a sum of Rs. 3,105 has been deposited with the Government. The committee received also a sum of Rs. 1,174 as deposits chiefly from weighmen for the badges supplied to them; and out of the deposits a sum of Rs. 7 has been refunded. The net assets of the Committee on 31-3-'40 are estimated as Rs. 38,245-0-8."*

The most important feature of the committee is the provision of central places for marketing. With the sanction of the Government five market yards were opened in important centres of the District. The five market yards are as follows:—

| *Name.* | *Date of opening.* |
|---|---|
| Tindivanam | .. 12-12—1939 |
| Vriddhachalam | .. 25—1—1940 |
| Tirukoilur | .. 29—1—1940 |
| Ulundurpet | .. 9—2—1940 |
| Cuddalore | .. 3—3—1940 |

They began to work at the fag end of the season and as such the transactions were not on a large scale. As regards the transaction from the date of their inception to the last day of March 1940, a table is appended herewith.**

*Vide South Arcot Groundnut Market Committee Report for 1939-40, pp. 4-5.
** Vide South Arcot Groundnut Market Committee Report, 1939-40, p. 12.

| *Market Centres.* | | *Estimated arrivals in the market centre.* (Tons) | *Arrivals in the market yard during the correspond-ing period.* (Tons) | *Percentage of the Quantity in column 2.* |
|---|---|---|---|---|
| | | (1) | (2) | (3) |
| Tindivanam | .. | 4505·8 | 208·6 | 4·5 |
| Vriddachalam | .. | 776·6 | 67·4 | 9·0 |
| Tirukoilur | .. | 1152·1 | 57·7 | 5·1 |
| Ulundurpet | .. | 506·4 | 142·2 | 28·0 |
| Cuddalore | .. | 265·9 | 64·3 | 24·0 |

Unlike other market yards, in Ulundurpet a major portion of the produce is sold through the market yard; for the yard is within the easy reach of the growers. In other centres, as the season is over only petty traders bring their produce for disposal. Moreover, the carts have to pass the buying sheds of the traders and hence get intercepted on the way. In order to carry out marketing efficiently as in the Dhulia market, the committee has proposed to expand the space in the yard and prohibit buying and selling outside the market yard.

As these market yards are not always within the reach of the traders, provision has been made in the Act to have licenced premises to carry out transactions. The fees per year for the licence are on the scale noted below:—

| | | | |
|---|---|---|---|
| *Class | (*i*) | For each single premises .. | Rs. 10 |
| | (*ii*) | For every additional premises .. | Rs. 5 |
| | (*iii*) | For each shop in villages where groundnut is bought and sold in retail as a side line to other business .. | Rs. 2 |

*Vide South Arcot Groundnut Market Committee Bye-law 11 (a).

The maximum fee leviable has been fixed at Rs. 25. For amendments in the licence an additional fee of Rs. 5 is charged while the owner of the country chekku is exempted altogether from the levy.

The licence form is always displayed well at a prominent place in the licencees' premises. Each copy of it costs one anna and if subsequent copies are required, the licencee has to pay four annas. It contains the following details:

(a) The name of the licencee,

(b) Licence number,

(c) The maximum fees payable according to the bye-laws to brokers, commission agents, etc., and

(d) Such other information as may be directed by the chairman from time to time.

During the year 1939-'40, 430 licences were issued for 712 premises. Many were the small premises without licence that carried on trade in remote villages beyond the reach of the Committee's officials. Though Rs. 25 was first fixed for a licence, it came to be reduced owing to the poverty of the traders.

The licencees engage assistants or agents to look after their work. They are required to have in possession authorization cards from the licencees with the endorsement of the committee. The weights and scales are scrutinized well and only certified weights are allowed to be used in the premises. When processing is carried on in these premises any method which will adversely affect the quality is prohibited. The licencees keep accounts which are submitted to the committee for scrutiny.

With the enforcement of the Act, trading in groundnut, whether buying or selling or both, requires registration in the market committee. By such registration the committee keeps in touch with every trader and closely watches his activities. For the levy of fees the traders are classified as follows:—

A Class—Traders with one or more partners and those registering as corporate bodies.

B Class—Traders registered as individuals employing four or more authorized agents or assistants.

C Class—Traders registered as individuals employing less than four authorized agents or assistants.

D Class—Individuals who do not employ any authorized assistants or agents and village shop keepers licensed under class (iii) of bye-law 11.

Since there are different classes of traders, the fees for registration vary. They are as shown below:—

| | | | Fees | |
|---|---|---|---|---|
| | | | Half-year | Year |
| | | | Rs. | Rs. |
| 1. | Buyer and seller—Class | A | 12½ | 24 |
| | „ | B | 9 | 16 |
| | „ | C | 6 | 10 |
| | „ | D | 1 | 2 |
| 2. | Buyer alone —Class | A | 8 | 15 |
| | „ | B | 6 | 10 |
| | „ | C | 4 | 6 |
| 3. | Seller alone —Class | A | 8 | 15 |
| | „ | B | 6 | 10 |
| | „ | C | 4 | 6* |

People who buy groundnuts either raw or processed are exempted from registering if the quantity bought does not exceed 7,000 lbs. in the course of the year. People who buy groundnut for seeds are also exempted from the purview of the bye-law.

The registered traders have to keep daily accounts a statement of which they should submit before 6 p.m. of the next day. Traders whose premises are beyond a five miles radius of the market yard are asked to submit only weekly returns. When the produce is examined by the buyers a rate is fixed up which is recorded in the prescribed form kept by the committee. When once the rate is fixed, it is binding on both the parties. As soon as the price is fixed, the weighment is done. If by some unavoidable delay the weighment is not done on the day when the transaction is carried, it is postponed to the next day while the original rate prevails. Even if the transaction is made through the agents of the parties, the

*Vide *Ibid,* Bye-law, 13.

rate once fixed prevails throughout till the transaction is over. Weighment is not done after sun-set except with the written consent of the seller.

The traders usually have agents to transact business on their behalf. They carry along with them authorization cards issued by their masters and countersigned by the Secretary of the committee. Whenever the trader registers himself, he submits a list of agents or assistants under him. For the subsequent inclusion of names in the list, the committee levies a fee of annas four. The agent of the seller is not allowed to purchase the produce in his own name or in partnership with some others except with the written consent of the seller in the prescribed form. The commission on this transaction is fixed at 0-1-6 pies per bag in the case of kernels and 0-3-0 in the case of pods.

By the introduction of such rules, the seller is safeguarded. Before the advent of the committee, the buyer used to deduct as commission 1½ annas to 4 annas per candy of groundnut bought. Besides, a deduction as weighment and handling charges varying from 1 anna to two annas was made. Brokers and buyers used to take free samples. Moreover, allowances for dirt were made. The price fixed was not always paid. Irregularities in weighing were not uncommon.

With the enforcement of the rules, the legitimate commission alone is allowed and that too has been reduced to nearly 50 per cent. Deduction regarding handling and weighment charges, has been put an end to. Now the samples are returned to the seller, and once the price is fixed, it never changes. Allowances for dirt have been now discontinued. Trade allowance of one pie per bag, which used to be collected, has been prohibited. Weighment irregularities have been stopped by a careful scrutiny of the weights and scale.

During the year 1939-40, the number of traders registered are as follows: —

| | | |
|---|---|---|
| Buyers and sellers—Whole year | .. | 153 |
| Buyers and sellers—Short periods | .. | 764 |
| Buyers alone | .. | 100 |
| Sellers alone | .. | 44 |
| | | **1061*** |

*Vide South Arcot Groundnut Market Committee Report, 1939-40, p. 16.

However, in villages petty traders to evade registration pass off as growers.

The brokers, whether they deal in pods or kernels, have to pay as licence fee Rs. 10 per year and Rs. 6 per half year. Their duties are that they have to enter in a bound note book provided by the committee, "the weights of pods or kernels from the seller's copy of the entries in the weighmen's chitta together with the rate and amount of money paid for the groundnut." They have to furnish weekly returns on each Monday in the prescribed form recording the quantity of groundnut purchased by each buyer and the name of the weighman. The maximum brokerage allowed is six pies per bag of kernels or two pies per bag of pods. On receipt of brokerage, they issue a receipt for the amount received. The South Arcot District has very few brokers. In 1939-40 only 18 got licensed.

The rules framed under the Act make the weighman independent of both the buyer and the seller. Weighment is allowed to take place in the licensed premises if it has to be performed outside the market yard. Only licensed weighmen who wear the distinguishing badge are allowed to weigh. They pay a licence fee of Rs. 6 per year. For shorter periods too the licence is issued. For example the weighman can get licence for a week on payment of eight annas or for one month if he pays a rupee. Free licences are issued by the committee for those who work in the market yards under the supervision of the committee and for weighmen employed in the Government depots of the Agricultural Department.

The weighman correctly weighs the produce brought to him and enters it in the register supplied to him by the committee for a nominal price fixed from time to time. His entry is endorsed by the buyer; and a copy of the entry signed by the buyer is also given to the seller. Weighmen employed by the registered trader demand no fee for weighment while others are allowed to charge up to 5 pies per bag of kernels or two pies per bag of pods. In order to receive the distinguishing badge, the weighman pays Rs. 2, which is refunded when the badge is returned. In 1939-40 nearly 592 weighmen took licences, but many escaped the vigilant eye of the committee.

Besides licensing the traders and regulating the weighment, the committee imposes a levy of six pies per bag of kernels and two pies per

bag of pods taken from the notified area to a place outside it, consumed locally or landed in the notified area and exported subsequently. The levy is imposed on him from whose premises the groundnut has left. When permits are required often, the licencee gets the necessary permits after furnishing adequate guarantee to the committee. If evasion is found out, the person from whose premises the produce has left is asked to pay. When the groundnut produce is transported through a non-notified area to another without being landed in the notified area, it is exempted from such a levy. In cases of doubt, the levy is first collected and later returned on proof of through transport. When oil-mills, rotaries, presses and expellers consume groundnut, the levy is made in the first week of every month which is based on the consumption of groundnut of the preceding month. But chekku owners are exempted from such a levy and also persons who buy ten seers shelled or fifteen seers unshelled groundnut per day.

No trade allowance except tare is allowed on all spot or ready transactions in groundnut. It is 2 lbs. for each single gunny or the actual weight of the gunny or of the packing material used.

We have already seen the constitution of the Disputes sub-committee and now let us consider the fees paid for such arbitration. The fees are charged on the basis of the quantity involved in the dispute and the rate of the fees is as follows:—

| (a) *For pods**:— | Rs. |
|---|---|
| (1) Less than 5 bags, free | |
| (2) Exceeding 5 bags but not exceeding 50 | 1 |
| (3) Exceeding 50 bags but not exceeding 500 | 3 |
| (4) Exceeding 500 but not exceeding 1,000 | 4 |
| (5) Exceeding 1000 bags but not exceeding | 5 plus |

annas two for every 100 bags or part thereof in excess of 1000 bags.

*Vide South Arcot Groundnut Market Committee Bye-law, No. 23.

(b) *For kernels:—*

| | | Rs. |
|---|---|---|
| (1) | Not exceeding 25 bags | 2 |
| (2) | Exceeding 25 bags but not exceeding 125 | 5 |
| (3) | Exceeding 125 bags but not exceeding 250 | 10 |
| (4) | Exceeding 250 bags but not exceeding 500 | 15 |
| (5) | Exceeding 500 | 15 plus |

annas four for each 50 bags or part thereof in excess of 500 bags. For appeal, the fees shall be double the rates fixed in (a) and (b) supra.

If the disputes are in places outside the market yard, the arbitrators can claim travelling allowances as per M.T.A. Rules in vogue for Government servants. The fees are payable in advance by both the parties. The arbitrators, or the umpires or the Disputes sub-committee, as the case may be, are the only persons authorized to decide as to whom and in what proportion such amounts are refundable. Deducting the travelling allowance from the total amount collected as fees, one-third of the net amount is credited to the committee's funds. The balance is equally distributed among the arbitrators. If an umpire is appointed, he gets half of the amount remaining after deducting a third from the total amount to be credited to the committee's fund. The rest is equally divided among the arbitrators.

Regarding market intelligence, it is in the formative period. The committee at first thought of getting the price quotations directly from London. The cost of the service was out of reach of the means of the Committee and the Marketing Advisor to the Government of India was consulted in the matter. By that time the war broke out in Europe and open trading in London was given up. As such, the idea of getting foreign prices had to be given up.

Now the committee has made arrangements with the exporting firms in their area and get their buying limits confidentially and publish the prices offered by them in the market yards for the sake of the public. As regular price data were not available, no market report or bulletin was published in the first year of the committee. In order to keep the Provincial Marketing Officer in touch with the market situation, weekly statements are sent to him. These are made available to the registered traders also; but as the statements are in English, the traders, who are ignorant of the language, do not evince any interest in them. As such,

the committee proposes to publish a very simple market report in Tamil in course of time.

In purchasing groundnut, generally make certain strict stipulations in the contract forms. The Act has as a provision Rule 19-A which authorizes the committee to draw up just forms of contract and to grade standards of quality. Though the Committee took up this subject with all seriousness, it dropped the matter when it came to know that already the question was engaging the attention of the Marketing Advisor to the Government of India. However, informal discussions were carried on with the local traders and their proposals were communicated to the Provincial Marketing Officer.*

*Marketing yard—its working*

It is proposed to describe here the actual manner in which the produce is disposed of. We have already seen that besides market yards there are licensed premises. Here let us confine our attention to the manner in which the groundnut brought by the cultivator is sold in the yard attached to the Superintendent of the Market Committee in Cuddalore Old Town.

The transactions that take place in the yard can be classified into two divisions—(1) auction sales and (2) ordinary sales. The market yard plays a prominent part in transactions of the former, while transactions of the latter type are not infrequent. Ordinary sales are conducted at any time, while auction sales are allowed to take place only during stipulated hours.

Let us see at first how an auction sale is conducted. As soon as the cart laden with the produce arrives at the market yard, the cart is unloaded. The load is entered in the register kept for the purpose. The name of the seller, his profession and the approximate quantity by weight are noted therein. The produce is heaped up in mounds on the floor. The heaped up produce is mixed well in order to assure the buyers that the quality is uniform. Unscrupulous sellers place dirt and bad stuff at the bottom of the bag while the top will exhibit pucca goods. To root out such fraudulent methods, the emptying of the bag is advocated. After emptying, each mound is allotted a number.

* See Appendix B: For the working of the Committee in 1940.

Now, word is sent to the traders and the exporting firms. They or their agents arrive at the yard and inspect the quality of the produce. Samples of the lots are taken which are returned later. After consulting their masters, they make a written and signed offer. The offer slips are sealed and sent to the yard and the officer in charge of the yard takes delivery of them after noting the time of their arrival on the envelopes which enclose the slips and drops them into a locked box specially kept for them in the yard. As the auction sales are done on a secret basis, the prices quoted in the slips are kept confidential. Even the superintendent of the yard is not aware of the price quoted in the slips. These slips are accepted till 3 p.m. on each day.

When the clock strikes three, the box is opened in the presence of the superintendent and the slips are taken out. Then the prices quoted in the slips are tabulated showing the highest bidder for each lot. Soon the prices are announced before the sellers, who, if willing, dispose of their produce. The sale is thus effected.

At times, the sellers themselves fix the minimum price for which they will sell the produce. If the price quoted by the buyers were to be below the minimum price of the sellers, the lot is withdrawn from sale.

A sale effected in the above manner is called an auction sale. Besides this, other kinds of sales are in vogue in the market yard. For example, when the seller arrives at the yard after three in the evening and when he is unable to wait till the next day, he readily negotiates with the buyer, if he is found in the yard. When a price is agreed upon the produce is weighed and the sale is effected. Here also the buyer and the seller sign a form kept for this purpose in the market yard.

It is a self-evident fact that the auction system has brought immense benefit to the ryot. Without the least expense of men and money the seller gets the maximum price possible. But the difficulty of reaching the yard still deters the growers from using the market yard to the full. Consequently we notice the prevalence of other kinds of transactions also.

## SECTION IX

## TRANSPORT CHARGES

A study of the marketing problem will be incomplete without a scrutiny of the railway freights on groundnut from the hinterland to the ports. Though the produce is brought to the ports in country bullock carts and motor lorries, the major portion of it moves from the producing centres to the ports in railway wagons. But it is unfortunate that the reports of the Railway Board have no separate figures for groundnut. They have included it along with other oil-seeds under heavy merchandise. As such there are insurmountable difficulties in finding out the trends in the rail-borne trade from these general figures. The following figures show the trend in the trade from 1934 to 1938.*

| *Year.* | *Traffic in Tons.* | *Earnings in Rupees* |
|---|---|---|
| 1934-35 | 3,357,500 | 2,98,47,900 |
| 35-36 | 3,084,400 | 2,77,46,300 |
| 36-37 | 3,842,100 | 3,31,48,200 |
| 37-38 | 3,516,200 | 3,03,68,100 |

Though the traffic has shown a downward trend at intervals, the total earnings show a steady increase with a fall in 1937-38. The foregoing figures are for the whole of India, but now let us examine the rail-borne trade in the Madras Province. The following figures clearly point to the premier position the groundnut trade occupies among the other oil-seeds. The figures are compiled from the "Southern India Commerce."

*Vide Figures from the Railway Board Reports.

*Rail-borne Trade of Madras Province* (in tons).

*Traffic in* 1939.

| Month. | Castor seed | | Groundnut | | Gingelly | |
|---|---|---|---|---|---|---|
| | Import | Export | Import | Export | Import | Export |
| January | .. 451 | Nil | 5027 | 1347 | 2439 | 1 |
| February | .. 1248 | Nil | 3113 | 12155 | 2808 | 4 |
| March | .. 1419 | 42 | 3222 | 5854 | 1404 | 1 |
| April | .. 1144 | 16 | 2794 | 4017 | 1776 | 8 |
| May | .. 1176 | 18 | 108 | 5716 | 511 | 9 |
| June | .. 765 | 18 | 3513 | 2145 | 528 | Nil |
| July | .. 399 | 8 | 2114 | 2809 | 609 | 9 |
| August | .. 416 | .. | 678 | 3258 | 748 | 1 |
| September | .. 1577 | 5287 | 56 | 907 | 1329 | 16 |
| October | .. 2564 | 155 | 71 | 871 | 2116 | 2 |
| November | .. 1109 | 5 | 4775 | 931 | 1433 | 32 |
| December | .. 227 | 103 | 6520 | 15184 | 2776 | 80 |
| | 12498 | 5609 | 31995 | 55200 | 18482 | 159 |

*Traffic in* 1940.

| Month. | Castor seed Import | Castor seed Export | Groundnut Import | Groundnut Export | Gingelly Import | Gingelly Export |
|---|---|---|---|---|---|---|
| January | .. 2819 | 90 | 1886 | 2494 | 1053 | 17 |
| February | .. 8304 | 169 | 1730 | 7888 | 3669 | 77 |
| March | .. 5414 | 104 | 2217 | 99390 | 3272 | 74 |
| April | .. 4036 | 131 | 3132 | 35707 | 1427 | 3 |
| May | .. 2202 | 88 | 1960 | 6818 | 859 | 7 |
| June | .. 4303 | 12 | 712 | 3559 | 517 | 2 |
| July | .. 123 | .. | 303 | .. | 538 | 1 |

From the above figures it can be said that in 1939, for which complete figures are available, the imports of groundnut into this province

was 2·5 times that of castor and 1·75 times that of gingelly. On the export side, we see that, in comparison with groundnut, castor and gingelly pale into insignificance. Caster forms only a tenth of the quantity of groundnut exports, while gingelly forms only 0·3%.

As groundnut producing areas are mainly found in the metre gauge tract, the traffic on these lines is the heaviest. "The total freight on the broad gauge amounted to 1,01,400 tons; on the metre gauge it was 2,46,300 and on the narrow gauge it was only 9,600 tons."

Regarding railway risk, groundnut has been classified and placed in the fourth class, the maximum and minimum for that class being 0·62 and 0·166 pie per maund per mile. But when the produce is carried in wagon loads of not less than 300 maunds in the broad gauge and not less than 160 maunds in the metre and narrow gauges, it is classified as 2A. at railway risk and 2 at owner's risk. The maxima and minima are 0·46, 0·42 and 0·109 pie per maund per mile respectively. In the South Indian Railway even when the produce is offered in bulk for transport, it is classified in the fourth class. Though it falls heavily on the producer, it has been contended that the producer could successfully bear the burden since this presidency is the premier producing centre for groundnuts. On the other hand it can be argued that by a reduced rate not only can the pride of the place be retained but also the economic prospects of the tract enhanced.

In South Arcot and the adjoining districts, the produce is sent to the ports by rail at railway and not at the owner's risk. If it is contrariwise, the rates will be lowered and thus confer a boon on the "producer-shipper." Scheduled rates are non-existent in the South Indian Railway. Though station-to-station rates are quoted, scheduled rates will in fact bring great benefits. For stations where station-to-station rates are not applicable, ordinary class rates are levied which are higher than those in the general classification. As such, a small trader from a station of secondary importance has to bear heavy rates if he wants to book his produce to any other station or port.

The station-to-station rates are a common feature in the S. I. R. Since South Arcot stands foremost in the production of groundnut, rates are quoted from and to places in the district. Cuddalore commands the major portion of groundnut export trade and, as such, rates are quoted from other stations to Cuddalore.

The following are a few station-to-station rates in the S.I.Railway: *

| Conditions of carriage. | From | To | Rates per maund. | Remarks. |
|---|---|---|---|---|
| W/160 O.R.L. | Anamalai Road (via Dindigul) | Cuddalore Jn. Madras Beach | 0–10– 3 | |
| do. | do. | | 0–10– 3 | |
| do. | Arni Road | Cuddalore | 0– 4–10 | |
| do. | do. | Madras Beach | 0– 5– 0 | |
| do. | Panruti | Cuddalore | 0– 1– 2 | Includes reduced terminal charge of 11 pies per maund free of short distance charge. |
| do. | Polur | Cuddalore | 0– 4–10 | |
| W/300 O.R.L. | Karur | Cuddalore | 0– 8– 4 | |
| W/160 O.R.L. | Ulundurpet | Cuddalore | 0– 2– 0 | |
| do. | Vriddhachalam | Cuddalore | 0– 1– 6 | Free of short distance charge. |

In the above table all the rates are at owner's risk, while the class rate alone is at the railway risk. Excepting Karur to Cuddalore, in all the other cases the wagon specification is 160 maunds and the requirement is that the loading and unloading is to be done by the public and not by the railways.

Let us now take a few rates for detailed investigation. The station-to-station rate from Anamalai Road to Madras as well as for Cuddalore is the same. Regarding Arni to Cuddalore the special rate is 0-4-10 per maund per mile, while the class rate comes to 0-5-3. The special rate from Arni to Madras, the distance of which is twice the distance from Arni to Cuddalore, is 0-5-0. In the class rate it comes to about 0-11-0 per maund per mile. The two examples clearly indicate that the railway authorities intend to minimise competition in exports between the ports.

Apart from these rates, periodically new rates are put into force, and these are withdrawn after a certain period. A few rates are given for comparison on page 80**:—

*Figures are compiled from IB—S.I.R. Goods Tariff.
** Vide "Road-Rail Transport" by S. R. N. Bhadri Rao, pp. 186-87.

| Conditions. | From | To | Rate per maund | Date of introduction |
|---|---|---|---|---|
| W/300 O.R.L. | Omalur | Cuddalore | 0-7-6 | 20—12—1937. |
| W/160 O.R.L. | Pennadum | Cuddalore | 0-2-5 | |
| do. | Vellore Cantonement | Cuddalore | 0-5-3 | |
| do. | do. | Pondicherry | 0-5-3 | |
| do. | Krishnagiri | Cuddalore | 0-7-4 | These rates were withdrawn as per local rate advice No. 5 of 1938. |
| do. | Morappur Jn. | Cuddalore | 0-8-0 | |

These rates are quoted to meet the exigencies of particular situations or to help the movement of traffic in bulk.

While the foregoing rates apply to local booking, station-to-station rates are quoted for through traffic. There are three such items in Part IB of the South Indian Railway Goods Tariff. They are as follows:—

| *Item No.* | | *From* | *To* | *Rate per maund* |
|---|---|---|---|---|
| W/300 | O.R.L. | Dasampatti | Madras Via Jalarpet. | Rs. As. Ps. 0 6 11 |
| W/160 | O.R.L. | Dharmapuri | „ | 0 8 8 |
| | | Krishnagiri | „ | 0 7 0 |
| W/300 | O.R.L. | Samalpatti | „ | 0 6 11 |
| | | Tirupattur | „ | 0 6 0 |

Groundnut oil is classified in the "C" division under oil together with gingelly and castor oil (not otherwise stated). The rate at railway risk according to class 2A. is 0·46 pie and at owner's risk is 0·42 pie per maund per mile. For safety in transport, the railway authorities insist on packing in metallic cases. Like groundnuts, the oil too has

station-to-station rates. The requirements regarding handling are the same as in the case of groundnut.

For groundnut oil too there are rates quoted for through traffic. The rate per maund on oil booked from Pollachi to Shalimar is Rs. 1-6-0. The specification is that it should be packed in tins, sound wooden barrels or in sound iron drums.

These freight rates are high when compared with the prices. For example, the rate from Pollachi to Madras, Negapatam or Pondicherry is the same rate of 10 annas per maund. "Comparing the freight rate with the price per maund, the former forms 14 per cent at current prices. These rates refer to local bookings only, but when through bookings are considered the percentage will be higher." Taking the class rate from Pollachi to Madras which is Re. 1-1-11 and comparing it with the highest February price, the incidence will come as high as 27½%. Though such a comparison is not right when station-to-station rate is available, it has to be taken; for station-to-station rate is allowed only on certain specific conditions. The station-to-station rate is allowed only in cases when the consignment equals minimum wagon load. So smaller consignments are subjected to the class rate. Moreover, the present surcharge of 12½% on all goods traffic *ipso facto* increases the burden. "It is wrong to charge staple commodities which yield the largest returns more than what they can bear, and it is an injustice to increase the rates."* The Acworth Committee even, as early as the third decade of this century, has criticized the surcharge. The Railway Member launched the surcharge on the ground that railway earnings were going down. But this argument falls to the ground when viewed from the economic stand point. To enhance earnings, the feasible method is to lower the rate. Low freight rates will yield increased railway revenues. The surcharge is a bane on the regular trade.

* "Road-Rail Transport," See Introduction by Dr. B. V. Narayanaswamy, page xxix.

## SECTION X

## EXPORT TRADE

While taking stock of the available supplies of a commodity, it is necessary to look to Production first; but the imports of the commodity have to be taken into account where they form a considerable bulk of the total quantity. In the case of groundnut, this problem is almost non-existent as the import of groundnut is extremely small. The absence of any mention of import trade of groundnut in the Review of the Trade of India is sufficient proof of the negligible quantity of the produce that comes in annually. But some idea of the same can be had from the Sea-borne Trade of India and the following table shows the quantity and value of the imported produce for a few years.

*Imports of Groundnut*

| Year | Quantity. Tons. | Value. Rs. |
|---|---|---|
| 1909-10 to 1913-14 | 159 | |
| 1922-23 | 2 | 872 |
| 1923-24 | 15 | 3,453 |
| 1924-25 | 103 | 28,799 |
| 1925-26 | 53 | 7,513 |
| 1926-27 | 18 | 5,226 |
| 1927-28 | 60 | |
| 1928-29 | 61 | |
| 1929-30 | 132 | |
| 1930-31 | 30 | |

| Year. | Quantity. Tons. | Value. Rs. |
|---|---|---|
| 1931-32 | 66 | 13,765 |
| 1932-33 | 5 | 1,891 |
| 1933-34 | 1 | 1,012 |
| 1934-35 | 9 | 1,764 |
| 1935-36 | 1 | 683 |
| 1936-37* | 15 | 1,981 |
| 1937-38* | 209 | 29,670 |
| 1938-39* | 96 | 14,229 |

The imports have thus ranged from 2 and 1 in 1922-23 and 1935-36 to 132 and 209 in 1929-30 and 37-38. The imports mainly come from Ceylon, the Straits Settlements, Mauritius, the Dependencies and a few other foreign countries. The table below will show the details:—

| | 22-23. | 23-24. | 24-25. | 25-26. | 26-27. | 31-32. | 32-33. | 33-34. | 34-35. | 35-36. | 36-37 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ceylon .. | — | 11 | — | 1 | — | — | — | — | — | — | — |
| St. Settlements. | 2 | 4 | 2 | 35 | 18 | 29 | 4 | 1 | 4 | 1 | — |
| Burma .. | — | — | — | — | — | — | — | — | — | — | — |
| Mauritius and Dependencies. | — | — | 101 | — | — | — | — | — | — | — | — |
| Other British Possessions .. | — | — | — | 1 | — | 1 | 1 | — | — | — | 15 |
| Total British Possessions .. | 2 | 15 | 103 | 37 | 18 | 30 | 5 | 1 | 4 | 1 | 15 |
| Java .. | — | — | — | — | — | 36 | — | — | — | — | — |
| Total foreign countries .. | — | — | — | 16 | — | — | — | — | 5 | — | — |
| Grand Total .. | 2 | 15 | 103 | 53 | 18 | 66 | 5 | 1 | 9 | 1 | 15 |

* Includes imports from Burma.

In 1937-38 Burma sent in 191 tons and 93 in 38-39. In 1937-38 18 tons were imported from British Possessions other than Burma thus making up a total of 209 and 96 for the two years respectively. The largest single consignment for the first five years for which figures are given above have come from the Straits Settlements and Mauritius and the Dependencies. These small quantities of imported seed are absorbed in the following areas as shown below. Bengal and Burma have been the largest importers.

*Shares of Imports between Provinces*

| | Bengal. | Bombay. | Sind. | Madras. | Burma. |
|---|---|---|---|---|---|
| 1922-23 | — | — | — | — | 2 |
| 1923-24 | — | 5 | — | 6 | 4 |
| 1924-25 | 101 | — | — | — | 2 |
| 1925-26 | 8 | 4 | — | 1 | 40 |
| 1926-27 | — | — | — | — | 18 |

| | Bengal. | Bombay. | Sind. | Madras. | Burma. |
|---|---|---|---|---|---|
| 1931-32 | — | 36 | — | — | 30 |
| 1932-33 | — | — | — | — | 5 |
| 1933-34 | — | — | — | — | 1 |
| 1934-35 | — | 5 | — | — | 4 |
| 1935-36 | — | — | — | — | 1 |
| 1936-37 | — | 13 | — | — | 2 |
| 1937-38 | 191 | — | — | 18 | — |
| 1938-39 | 96 | — | — | — | — |

During all these years groundnut was imported into India only through the British Ports, and the French Ports did not import any.

*Exports.*

As has been pointed out in a previous section a large portion, sometimes as much as three fourths of the total production, is being retained for consumption within the country. In spite of this dominant tendency for retaining a great part of the total production, India provides nearly two fifths of the groundnut entering international trade.

An idea of the percentage of exports to total production can be had from the following table compiled from the Review of the Trade of India.

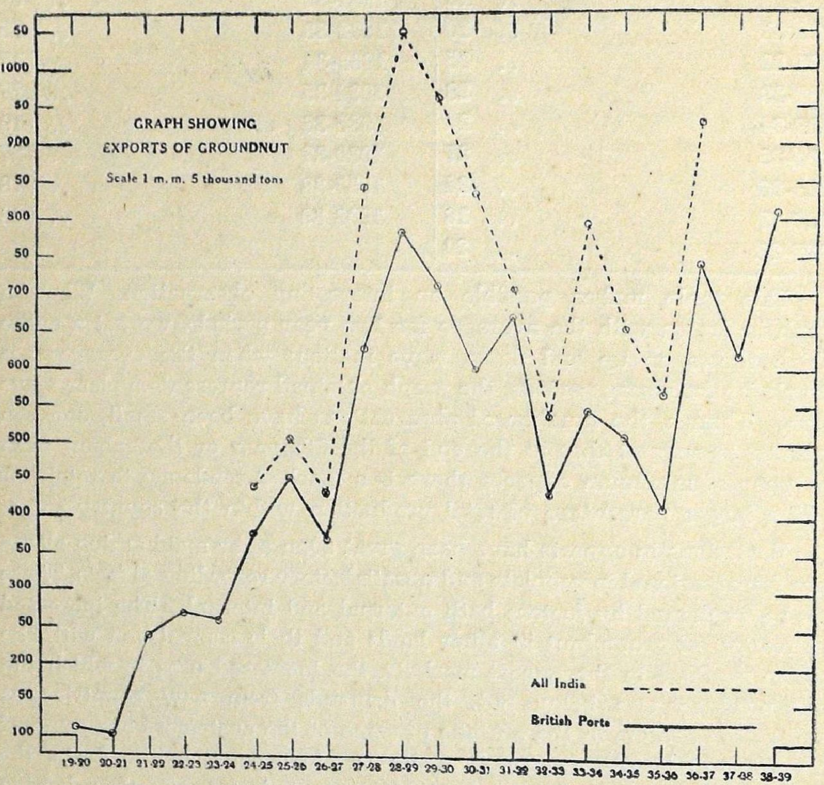
*Percentage of Indian Exports of Groundnut to Total Production.*

| | | | |
|---|---|---|---|
| Pre-War Average | 35 | 1928-29 | 26 |
| War ,, | 12 | 1929-30 | 29 |
| Post War ,, | 19 | 1930-31 | 19 |
| 1919-20 | 13 | 1931-32 | 30 |
| 1920-21 | 10 | 1932-33 | 15 |
| 1921-22 | 25 | 1933-34 | 17 |
| 1922-23 | 28 | 1934-35 | 27 |
| 1923-24 | 24 | 1935-36 | 19 |
| 1924-25 | 27 | 1936-37 | 27 |
| 1925-26 | 24 | 1937-38 | 18 |
| 1926-27 | 16 | 1938-39 | 28 |
| 1927-28 | 24 | | |

This table makes possible an interesting observation. When a graph is drawn with the averages for two year periods, we get a curve which shows an up and down wave motion; when the averages are struck for four year periods, the graph obtained represents a clear wave form. Though the number of observations have been small, one can venture to suggest that at the end of the 8th year or thereabout from the year of minimum exports, there is a marked tendency to retain or hold a larger percentage of total production within the country.

Variations in exports have been great even after making due allowance for occasional incomplete and unsatisfactory recording of facts. These can be explained by factors both external and internal. The increased cultivation of groundnut in other lands and their competition with the Indian produce in the export markets, the increased uses to which the raw produce was being put, the demands from new countries as well as the decline in the off-take of some of the customers are some of the external factors causing fluctuations. In a country like India, the influence of exchange rates is an important factor affecting foreign exports. Further, the difficulties of shipping, trade treaties and the rise of new devices checking the natural trend of foreign trade have been seriously impeding the natural growth of the export trade at certain times. It needs to be added that the internal production, consumption and trend of prices, mutually interdependant as they are, also considerably influence the export trade of the country.

GRAPH SHOWING EXPORTS OF GROUNDNUT



A study in detail of the rise and fall of exports of groundnut would enable us to trace the factors that have been influencing the exports from time to time. The total exports from India can be gathered by totalling up the individual exports from the British, French, Portugese (Indian) and Kathiawar ports.* In this task one has to face the lack of material regarding exports of groundnuts from a few of these ports for some years. The figures given below have been made as accurate as possible.

*Groundnut Exported from India in thousand tons.*

| | Exports from Br. Ports. | All Ports. |
|---|---|---|
| Pre-war average | 212 | |
| War average | 119 | |
| Post-war average | 195 | |
| 1919-20 | 112 | |
| 1920-21 | 104 | |
| 1921-22 | 236 | |
| 1922-23 | 267 | |
| 1923-24 | 257 | |
| 1924-25 | 376 | 437 |
| 1925-26 | 455 | 507 |
| 1926-27 | 368 | 433 |
| 1927-28 | 613 | 844 |
| 1928-29 | 788 | 1052 |
| 1929-30 | 714 | 957 |
| 1930-31 | 601 | 836 |
| 1931-32 | 672 | 709 |
| 1932-33 | 433 | 536 |
| 1933-34 | 547 | 797 |
| 1934-35 | 511 | 659 |
| 1935-36 | 413 | 565 |
| 1936-37 | 740 | 927 |
| 1937-38 | 619 | — |
| 1938-39 | 835 | — |

The table clearly shows the trend towards increase and decrease. From 1924-25, a regular increase is noticeable upto a maximum of nearly

* Vide Appendix: Table IX.

1052 thousand tons in 1928-29 with a slight interruption in 1926-27. Thereafter, there has been a fall which, though gradual at first, reached its lowest level in 1932-33. The fall from 1928-29 has been explained as "purely a result of the general economic depression." "The decrease in 1926-27 has been attributed to the holding of supplies in the hope that prices which were beginning to fall would recover. Falling prices in the year 1932-33 may also account for the magnitude of the drop in exports during that year; while the failure of prices to recover apparently led to the release of large quantities in 1933-34." The figures of British Ports, which alone ship nearly half of the exports, show the same trend prevailing. Indian exports in 1935 were far below that of any year since the maximum in 1928-29. Besides the general cause attributed to the fall since 1929, the decreasing use of groundnut oil in margarine and soap manufacture has also been a cause of the fall in demand for the raw product in foreign countries. The year 1937 is peculiar for the reason that there was an even distribution of the exports of groundnut between the five important countries; all of them viz., United Kingdom, the Netherlands, France, Germany and Italy, took more or less the same quantity of the raw produce, i.e., about 15%. Of these, Italy was the heaviest importer with about 18% of exports to her credit. 1938 was the only year of normal exports before the war began to play havoc on trade. The effect of the present war on the export trade of groundnut will be considered later.

A word about the total value of our exports of groundnut is necessary. The importance of the groundnut crop from the commercial point of view can be gauged from the following table which shows the relative value of groundnut export trade to total exports in millions of rupees. The table has been compiled from "Oil-seeds Survey" of the years 1936, 1937 and 1938, published by the League of Nations.

*Table showing Relative Value of Groundnut Exports to Total Exports (Millions of Rupees).*

| Year. | All Domestic Produce. | Groundnut. | Percentage. |
|---|---|---|---|
| 1926-30 (average) | 3093 | 146 | 4·7 |
| 1931-35 | 1500 | 74 | 4·9 |
| 1936 | 1806 | 95 | 5·3 |
| 1937 | 2024 | 108 | 5·3 |

Thus the export value of groundnut trade to total trade has increased from 4·7% to 5·3%; as such, its importance as a commercial crop can be easily appreciated.

Madras being the largest producer of groundnut with as much as 3·3 million acres under cultivation, the exports from Madras Presidency have always been very great. The following table compiled from the notes of the Review of the Trade of India shows the increasing importance gained by Madras in the post-war years.

*Exports from the Madras Presidency.*

| | Percentage to total exports. |
|---|---|
| 1930-31 | .. 76 |
| 31-32 | .. 74 |
| 32-33 | .. 81 |
| 33-34 | .. 83 |
| 34-35 | .. 85 |
| 35-36 | .. 81 |
| 36-37 | .. 86 |
| 37-38 | .. 91 |
| 38-39 | .. 92 |

With a slight fall in 1935-36, the exports from the ports of the Madras Presidency have been steadily increasing. In 1930-31 Madras claimed three fourths of total exports, while in 1938-39, her exports were more than 9/10 of total exports. The rest of the exports has been made through the ports of the Bombay Presidency, and from being the exporter at one time of nearly a quarter of total exports, Bombay has slowly declined until to-day she shares only one-tenth of the total exports.

The groundnut export trade can also be studied from the point of view of the share of the French and British ports in the export trade. Such a study brings out the fact that the French ports have been gradually declining in importance, while the British have been steadily gaining ground. This point will be borne out by the following figures:—

*Percentage of Exports through French Ports.*

| | | |
|---|---|---|
| 1909-10 to 1913-14 | average. | 30 |
| 1924-25 | | 14 |
| 25-26 | | 10 |
| 26-27 | | 15 |
| 27-28 | | 12 |
| 28-29 | | 9 |
| 29-30 | | 12 |
| 30-31 | | 10 |
| 31-32 | | 5 |
| 32-33 | | 5 |

The same feature has been noticed in the exports of groundnut between Pondicherry and Cuddalore Ports. Pondicherry has been losing ground. This has been taken advantage of by the Cuddalore and Porto Novo Ports in the South Arcot district. It is noteworthy that merchants from the French territory of Pondicherry come to the Cuddalore port for exporting goods; sometimes they are prepared to bind themselves to pay such new taxes as the Sales Tax. The deflection of trade from Pondicherry can only be explained by the rather complicated new export and port duties levied at French Ports.

With an annual average of nearly 66,000 tons in the pre-war quinquennium and 40,000 tons in the period 1924-28, France has been the main market for the exports from French Ports. Even from the exports of British Ports, French off-take held the first place for many years till Germany outbeat her for the first time in 1927-28 and 1928-29. For the Portuguese Indian Ports, Germany, the Netherlands and Italy were the chief consignees during the years 1927-31 with an annual average of 55,000, 37,000 and 20,000 tons respectively. The Netherlands provided the chief market for the export from Kathiawar ports for a long time; and the United Kingdom came next.

France has always been the most important purchaser of Indian groundnut exported through British ports in the pre-war as well

as the post-war days. The export figure in the pre-war quinquennium can be roughly put at 170,000 tons per annum, but the average rose during the period 1924-33 from 20,000 tons to 190,000 tons. Expressed as percentages, the Indian imports rose from 40% in 1922 to about 62% in 1933 of the total imports of groundnut into France. The averages indicated in the last column of the following table show how the trend towards increase continued upto 1933. Since then, French imports have been rapidly declining. Expressed in tons, she took only 130,173 and 96 thousand tons in 1935, 36 and 37 respectively as compared to the peak figure of 219 thousand tons in 32-33.

That the French imports of groundnut have been rapidly declining can be well grasped from the following table, compiled from the Review of the Trade of India. She has been importing some quantity of unshelled nuts as well as shelled nuts; the quality of shelled nuts imported has not been very high. It is said, that she sometimes went in for even the '*blacks*,' whose presence is objected to, for instance, by the British buyers.

The table reveals how after reaching the maximum in 1925 the unshelled groundnut imported into France has been slowly declining. It can be said that to-day the export of unshelled groundnut is insignificant. Regarding imports of shelled groundnut, the percentage averages for periods of four years show the trend clearly. The increase is visible upto 1933, after which there is a sudden fall from 49·95% to 27%.

*Imports of Groundnut into France in* 1000 *Quintals.*

| Year. | Unshelled. | Shelled. | Percentage. | Average for 4-year periods. |
|---|---|---|---|---|
| 1913 | 325 | 2442 | 58 | |
| 1914 | 265 | 2700 | 58 | |
| —— | —— | —— | — | |
| 1922 | —— | 1626 | 40 | |
| 1923 | —— | 2315 | 50 | |
| 1924 | 106 | 1747 | 40 | |
| 1925 | 118 | 1948 | 40 | 42·5% |

| Year. | Unshelled. | Shelled. | Percent-age. | Average for 4-year periods. |
|---|---|---|---|---|
| 1926 | 102 | 2060 | 42 | |
| 1927 | 72 | 1602 | 35 | |
| 1928 | 33 | 2680 | 49 | |
| 1929 | 32 | 2919 | 49 | 43·75% |
| 1930 | 46 | 2548 | 41 | |
| 1931 | 41 | 2462 | 40 | |
| 1932 | 15 | 2595 | 53 | |
| 1933 | 7 | 3070 | 62 | 49·% |
| 1934 | — | 1527 | 23 | |
| 1935 | — | 1736 | 29 | |
| 1936 | — | 1990 | 29 | |
| 1937 | — | 1153 | 28 | 27·25% |
| 1938 | — | 2113 | 46 | |

The reason for this is to be found in the imposition of an import duty in France. There was no such duty on groundnuts imported into France previous to the year 1933; but from 11th August 1933, groundnuts "other than those produced in French Colonies and Protectorates were subjected to a duty of 8 Francs per 100 kilograms if undecorticated and 11 grams per 100 kilograms if decorticated." These duties were further raised in 1934. These and other duties levied in France were meant to subsidise the production of oil-seeds in the French Colonies and Protectorates. The bulk of the imports of groundnut into France is now secured from her Colonies. She has regulated her imports in recent years by the quota system. Since July 1934, she has set apart one half of imports for the produce of her Colonies.

Though France has declined much in importance as an importer of Indian groundnut, still a greater part of our exports go to her. Analysing the distribution of exports from British ports between various countries for the three years, 1935, 1936 and 1937, the following results are secured:—

*Distribution of Exports through British Ports (in percentages)**

| | 1935 | 1936 | 1937 | Average for 3 years. |
|---|---|---|---|---|
| United Kingdom | 22·1 | 16 | 15 | 18 |
| The Netherlands | 17·9 | 26 | 17 | 20 |
| France | 36·3 | 29 | 15 | 27 |
| Belgium | 2·3 | 4 | 6 | 4 |
| Germany | 15·1 | 14 | 14 | 14 |
| Italy | 2·7 | 6 | 18 | 9 |
| Egypt | 0·6 | — | 10 | 3 |
| Denmark | — | 1 | less than ·5 | ·5 |
| Other countries | 3·0 | 4 | 5 | 4 |
| Total | 100 | 100 | 100 | |

Thus France, the Netherlands and United Kingdom occupy the first three places respectively and together share about 65% of total exports. Germany and Italy come next, sharing more than a fifth and nearly a quarter respectively of the total exports.

The Indian trade in groundnut with the Netherlands has been an instance of remarkable growth. From 150 tons per annum in the pre-war quinquennium her export trade with the Netherlands rose up 40,000 tons in 1925-26 and mounted up consistently till it reached 170,000 tons in 1930-31, which is the maximum she has imported from India during the period under review. A feature of the trade with the Netherlands is that a greater part of the exports to that country are not consumed there itself, but are re-exported.

Trade with United Kingdom also experienced a tremendous increase during the third decade of the 20th century. From about 2000 tons in the pre-war quinquennium, it increased to nearly 5 times in 1925-26. Exports to United Kingdom increased without any interruption up to

* Figures from Sea-borne Trade of India are given in the Appendix: Table X.

1928-29 when they came to roughly 53,000 tons; with a fall in the next year, it shot up to 78,000 tons in 1931-32. In the next year, there was a precipitous fall by nearly 50% in the exports to U.K. and though there was a recovery in the next two years, in 1935-36 the exports once again fell by about 50% compared to the previous year's maximum of 134000 tons. Though exports have increased since then, they have not yet attained the level of 1934-35 which was the peak year for the period under review.

There was a marked improvement in the trade between Germany and Italy in the post-war days. Both these countries imported the maximum amount in 1928-29. Since then, there has been a fall and they touched the lowest figure in 1932-33. While German imports have been steadily increasing from 1932-33, Italy's share decreased very much once again in 1935-36. Both the countries imported the maximum quantities in 1937-38. From a study of the imports of groundnut by these two countries, one is struck by the similarity of the trends between them.

Trade with Belgium and Spain has been to a great extent curtailed, owing to Belgium's preference for French West African produce and Spain's Official Decrees severely restricting the imports of Groundnut into Spain from 1926.

The export trade of Indian groundnut is mostly after decortication. Though it is well known that the sending of undecorticated nuts would be beneficial to buyers, as it would preserve the quality of the seed, the high freight charges of undecorticated nuts compel the Indian merchants to export only decorticated nuts. It is said that shelled nuts occupy only half the space required by unshelled nuts.

*War and Groundnut Trade.*

The present war has seriously affected Indian economy on many sides. Indian exports have greatly suffered. While the markets of the belligerents have been almost closed, the serious lack of shipping space has greatly diminished exports even to non-belligerents. Of the many commodities that have suffered because of this war, groundnut is one and it has lost the greatest share of the total value of our exports to European countries.

On the basis of the figures of 1937, it is seen that Italy and Germany have been importing roughly a third of our total exports in groundnut;

and together with the Netherlands, they occupied 50% of our total exports. Along with France the exports to these four countries amounted to 67% of the total exports. In this connection, we have to note that in the four years previous to the outbreak of the war, the average annual purchases of the Netherlands, France, Germany and Belgium, amounted to 368 thousand tons. In the year immediately preceding the war, they imported from India about 562 thousand tons. The volume of exports from British ports decreased by 50% in the case of the Netherlands and Germany in 1939-40 as compared with 1938-39. Exports to France have declined in the same period from 15,000 to 9,900 tons. In the case of Italy, exports from British ports declined by about 1500 tons. While there has thus been a contraction in the case of Continental countries, there has not been a corresponding increase in the intakings of the United Kingdom. Between 1938-39 and 1939-40, an increase of only 1200 tons is noticeable, an increase not even sufficient to compensate the loss on account of Italy. The loss in value may be estimated from the following figures : *

*Value of Groundnut Exports from India to Europe in* 1938-39

(Figures in Rs. lakhs.)

| | | |
|---|---|---|
| Germany | .. | 134 |
| The Netherlands | .. | 276 |
| Belgium | .. | 78 |
| Denmark | .. | 27 |
| Norway | .. | 12 |
| Sweden | .. | 1 |
| France | .. | 178 |
| Italy | .. | 41 |
| Czecho-slovakia | .. | 40 |
| Total | .. | 787 |

Thus on the basis of 1938-39, it may seem that India has been deprived of markets that were consuming nearly 8 crores worth of groundnut.

* Taken from the Meek-Gregory Report.

But we have to consider that their intakings in 1938-39 were "more than 50% greater than their average for the previous four years, and in making an estimate of market lost, a corresponding reduction should really be made in the value of figure of Rs. 8 crores given above." Anyhow it cannot be denied that markets that would consume about 5 crores worth of groundnut have been lost at present. It was with a view to finding out how far U.S.A. may be able to absorb the surplus quantities left in India on account of the war, that the Meek Gregory Mission was sent to America. Their findings relating to groundnut may be quoted here:—

" ....So far as groundnuts are concerned, the U.S.A. is also a large producer and in recent years the government diversion payment programme has tended to increase the domestic production of both groundnuts and groundnut oil. If the import of groundnuts became large, the whole question would probably come up for examination with possible unfortunate reprecussions on India's large trade in Cashew Kernels. The U.S.A. is still capable of a larger domestic production of groundnuts. There does not appear, therefore, to be any large alternative market for this commodity in the U.S.A."

## SECTION XI

# PRICES

The price statistics of agricultural commodities maintained by the Government is far from satisfactory and this point has been amply illustrated in the various marketing reports. The price statistics supplied by Governments differ from the trade prices. Moreover, we notice different figures are given in different Government reports. Hence great difficulties are encountered in making a detailed study of prices. But in the absence of any organised trading especially in groundnut and the regular maintenance of records by private bodies, we have necessarily to fall back upon Government price statistics as the last resort. In the following pages the prices quoted are taken from the Indian Trade Journal unless otherwise stated.

Before considering the manner in which prices are actually determined in the markets, it would be worth while to study the trend of prices of groundnut. As the quality of nuts produced in different areas is different, a single price for the whole of India becomes chimerical and an impossibility. The two important producing centres are Madras and Bombay of which the former is the more important in as much as 60% of the total Indian production comes out of Madras. Further, it was seen in the last section that exports from Madras have been slowly gaining ground, with 9/10 of total exports in 1938. Under these circumstances the Madras prices need a careful study, as it may be considered not only to represent, but control in a more or less reasonable degree the price fluctuations with regard to groundnut for the whole of India.

The following table gives the average annual prices per French candy of 500 lbs. The manner in which these prices have been calculated may be mentioned. The weekly prices as given in the Indian Trade Journal are taken and the monthly averages calculated. From these monthly prices the annual average prices are derived.

| Year. | Price | 2 Yr. averages | Year. | Price | 2 Yr. averages |
|---|---|---|---|---|---|
| | Rs. | | | Rs. | |
| 1922 | 63·8 | | 1931 | 27·6 | .. 31·3 |
| | | | 1932 | 35·1 | |
| 1923 | 64·9 | .. 64·8 | 1933 | 24·9 | .. 22·9 |
| 1924 | 64·7 | | 1934 | 20·9 | |
| 1925 | 57·3 | .. 54·6 | 1935 | 35·7 | .. 35·5 |
| 1926 | 52·0 | | 1936 | 35·4 | |
| 1927 | 52·8 | .. 53·6 | 1937 | 33·2 | .. 28·9 |
| 1928 | 54·4 | | 1938 | 24·7 | |
| 1929 | 49·5 | .. 42·5 | 1939 | 27·6 | .. 27·2 |
| 1930 | 35·6 | | 1940 | 26·9 | |

From the second column of the above table wherein the averages for the two-year periods are given, the trend of price changes can be understood. Except in the first three years wherein the prices have been fairly steady, a tendency for prices to fall is recorded from 1925, when it fell from Rs. 64·7 to Rs. 57·3 per candy. Since then, the two-year averages indicate a precipitous fall during the periods 1929 and 1930, 1931 and 1932, and 1933 and 1934. The prices in the last period, i.e., 1933 and 1934, touched the lowest figure of Rs. 20·9 in 1934. In the next year the prices shot up by nearly Rs. 15 and remained stationary about that level in 1936 also. But once again falling prices made their appearance. During the four years from 1937, the lowest figure was recorded in 1938; and though there was a slight recovery in prices in the two succeeding years, the trend of decreasing prices has continued as is evidenced by the figures of two-year averages.

The precipitous fall of prices from 1929 may be explained as the outcome of the depression, as also of the restriction of imports into Germany arising out of her exchange difficulties. The heavy production of whale oil resulting in the decline of the demand of groundnuts, the general increased production of groundnut and other oil-seeds, the decline owing to the competition from cheap butter, in the manufacture of margarine, for which groundnut oil is most useful, and the decline in the demand in Europe for oil-cakes,—all these may be added as subsidiary factors, in addition to the general considerations cited above, as being partly res-

ponsible for the steep decline in prices since 1929. It might be interesting to note that it was during this period of declining prices that the exports increased very much. The recent fall in the prices may be explained as being due to the general decline in commodity prices since 1937, to the record production of groundnut in that year and also to the restriction of French imports of Indian groundnut to which reference has already been made in the last section. In our study of groundnuts the monthly changes in prices is as important as the annual average prices. The following table gives the average prices for every month during certain periods. It is possible to infer from such a table whether there is any seasonal fluctuation in prices.

| Month. | | 1922-25 | 1926-29 | 1930-33 | 1922-38 |
|---|---|---|---|---|---|
| January | .. | 59·0 | 50·7 | 31·7 | 41·9 |
| February | .. | 60·7 | 51·8 | 33·1 | 43 |
| March | .. | 64·5 | 52·0 | 33·6 | 44 |
| April | .. | 64·3 | 51·7 | 32·9 | 43·8 |
| May | .. | 64·6 | 53·1 | 32·1 | 44·1 |
| June | .. | 64·3 | 53·5 | 30·7 | 43·7 |
| July | .. | 64·5 | 54·0 | 33·1 | 44·6 |
| August | .. | 65·0 | 53·0 | 32·0 | 44·5 |
| September | .. | 65·2 | 52·9 | 29·9 | 43·9 |
| October | .. | 64·6 | 54·2 | 28·5 | 43·5 |
| November | .. | 61·0 | 50·1 | 26·8 | 41·0 |
| December | .. | 57·1 | 49·1 | 25·5 | 39·5 |

The table reveals that there are not very violent seasonal fluctuations; but it would be untrue to deny such fluctuations altogether. The first arresting factor that is visible from the table is the increase in prices from January to March. In some years this increase continues up to May also. Generally, from March to October, though there are fluctuations, the prices are fairly steady. From November onwards there is a definite trend for prices to fall down, a tendency which continues to the next month also. The fall may perhaps be due to the plentiful supplies that come to the market during harvest time.

*The War and its effect on Prices.*

The effect of war on the prices of groundnut may be studied, as it would be of some help in understanding the present plight of the cultivators of this crop. The war broke out in September 1939, and the year recorded the maximum off-takings by the Continental countries of nearly 568 thousand lbs. The following table shows the trend of prices month-war since January, 1939 to February, 1941.

| Months | | 1939 | 1940 | 1941 |
|---|---|---|---|---|
| January | .. | 24·4 | 29·6 | 19·6 |
| February | .. | 24·5 | 29·7 | 19·2 |
| March | .. | 24·3 | 31·2 | |
| April | .. | 24·6 | 33·2 | |
| May | .. | 27·8 | 32·4 | |
| June | .. | 29·7 | 27·8 | |
| July | .. | 28·2 | 23·9 | |
| August | .. | 29·0 | 24·1 | |
| September | .. | 28·3 | 25·2 | |
| October | .. | 29·8 | 24·3 | |
| November | .. | 30·8 | 20·9 | |
| December | .. | 30·1 | 20·3 | |

After being steady at about Rs. 24 during the first four months of 1939, the price showed a definite trend towards increase, which, though upset in particular months, continued upto nearly 6 months after the war had broken out, recording a rise of nearly Rs. 9 during a period of 16 months. Thereafter there was a fall far steeper than the rise. From Rs. 33 in April 1940, it came down to Rs. 20 by the end of the year i.e., within 8 months the prices had declined by about Rs. 13. The fall continued in the present year also coming down as low as Rs. 19·2 in February 1941. The seasonal decline in prices that is generally noticeable in November and December is not to be found in the year in which the war broke out. This feature as well as the increase running up to April 1940 may be explained as due to the heavy purchases in 1939. Part of the increase in prices can be ascribed to the psychological reactions that were visible

during the first few months of the war and the consequent general increase in prices during the war period. The subsequent fall in prices must be attributed to the war, to the closure of the Continental markets owing to the blockade. The fall of France, and the increase in freight and insurance charges had their effect in pushing down the Madras prices. The lack of shipping space which restricted to a certain extent the usual imports of the non-belligerents, resulted in intensifying the glut in Indian market with consequent undesirable reactions on prices.

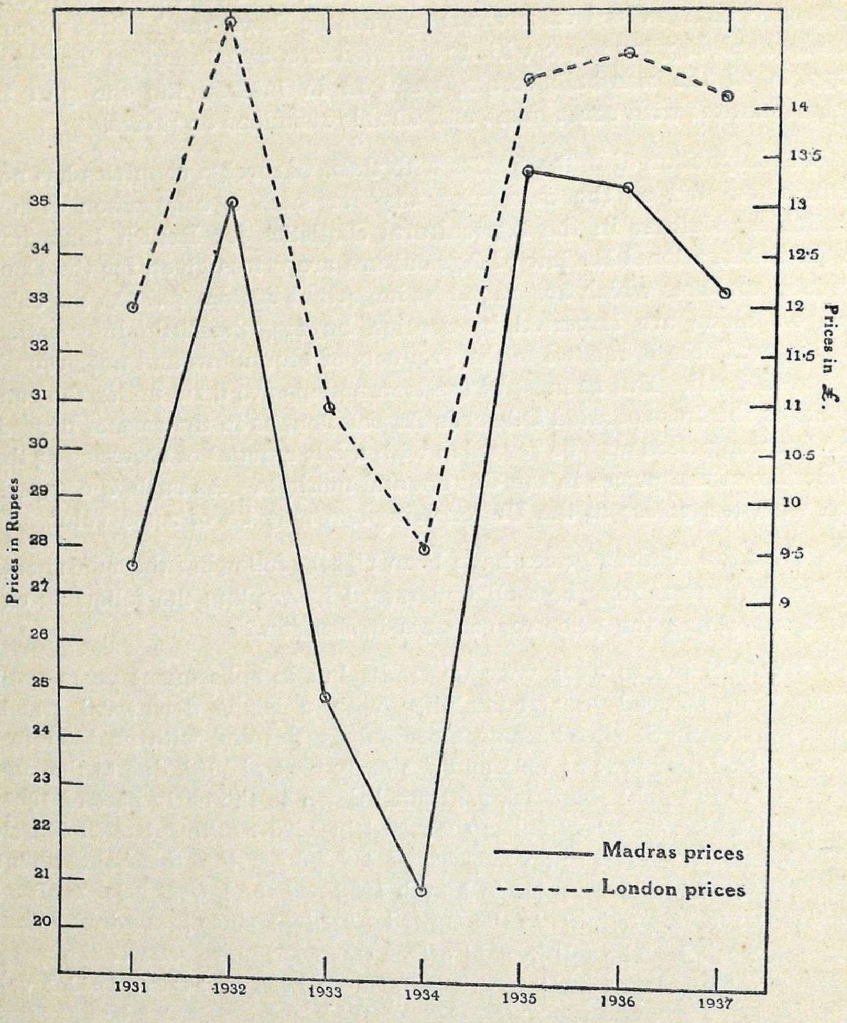
A comparison of Indian prices with those of foreign countries has not been attempted as the data necessary for such a comparison is not available. Neither in the Agricultural Statistics for British India nor in the International Review of Agriculture are prices given for the Continental markets which are our most important customers. As the cake and oil alone are imported by foreign buyers, the little information that is available is related to the products of groundnut and not groundnut seed itself. But as most of the transactions are done under the contracts of the Incorporated Oil-seeds Association, as in the case of linseed, the London prices may be regarded with a fair amount of accuracy as the indicator of the prices in the Continental markets. As such, a comparison with the prices in the United Kingdom may be of some value.

That the Madras prices have been closely following the movements of London prices may be well understood by reading the following extract describing the price movements in London.*

"In 1921 prices were very unsteady, but in subsequent years until 1928, they showed greater stability with a slight downward trend. Thereafter, the decline became more substantial and with an interruption in the latter part of 1931 and the early part of 1932, due to the suspension of the gold standard, continued down to the early part of 1934. The fall which was particularly marked in 1933 continued until March 1934 when prices fell to an average of £8-5-0 per ton. this being about one-half of the average price in March 1932 and the lowest price realised until then for groundnuts in the United Kingdom, since groundnut prices were recorded. The fall in gold prices was even more severe, the average prices in March 1934 representing only 40% of March 1932 level. There was some recovery after March 1934 and by September sterling prices reached £10-15-0 per ton or slightly more than in September 1933."

* Oil-seeds Survey, p. 208.

GRAPH SHOWING LONDON AND
MADRAS PRICES



The close relationship existing between Madras prices and London prices is also revealed by the following table and the graph on the opposite page.

| *Year.* | *London prices in £.* | *Madras prices in Rs.* |
|---|---|---|
| 1931 | 11·95 | 27·6 |
| 1932 | 14·9 | 35·1 |
| 1933 | 10·95 | 24·9 |
| 1934 | 9·5 | 20·9 |
| 1935 | 14·3 | 35·7 |
| 1936 | 14·55 | 35·4 |
| 1937 | 14·2 | 33·2 |

We may now turn to the manner in which the prices are determined in the Madras and other mofussil markets. But before considering this it is very essential to bear in mind that the whole price structure of groundnut in India is under the firm control of the exporting firms who are the chief buyers. Generally there is very little of competition between them except on rare occasions.

The exporting firms at Madras are informed of the daily price changes and the quantity they should buy by cable from their Home office. The buyers at Madras deduct 5% of the price quotation they receive and from the balance they arrive at they deduct charges for various items such as freight charges, cost of gunnies, shipment, insurance charges; in addition to these a particular percentage is charged again towards establishment. The price secured after making all deductions is then announced. When such an announcement is made the quality also is stipulated. The price quoted by the exporting firms is always for the "pucca" quality. We shall presently see how these firms make the deductions for the "katcha" quality they buy. Before that, the exact way in which price deductions are made by the exporting firms may be noted down.*

* The following calculation has been made on the basis of rates prevailing before the outbreak of the war.

| | | |
|---|---|---|
| Let us suppose that the price (per ton) quoted by the exporting firms is equal to | .. | £11 0 0 |
| Freight per ton and 5 per cent deduction | .. | 1 12 6 |
| Balance | .. | £ 9 7 6 |

Value of £9-7-6 on that day's exchange rate @ Rs. 13-4-0 per £ = Rs. 130 per ton. Price of one candy = Rs. 31-0-0. From this Rs. 31/- deduct

| | | |
|---|---|---|
| Cost of gunnies | .. | 1 0 0 |
| Insurance charges on 3 bags | .. | 0 6 0 |
| Cost of shipment @ 10 as. per candy | .. | 0 10 0 |
| Total | .. | 2 0 0 |
| Balance | | 29 0 0 |

From this Rs. 29 a certain percentage is kept towards establishment charges. This is how the price is said to be fixed by the shipping firms in Madras. The sub-agencies in the mofussil are then advised to purchase up to a particular quantity on that price.

The produce that is bought by the sub-agencies is of the katcha quality. Katcha quality means that it is inferior to the quality that is shipped, containing a high percentage of blacks together with dust, touched, shrunken and damaged seeds. It is only when all these are removed and the goods purified, that they come up to a standard suitable for shipment. As already mentioned, the prices quoted by the exporting firms are for the pucca quality and when they buy katcha they are necessarily bound to make deductions for the above mentioned impurities. It is in the strictness with which price deductions are made that the Indian cultivator is hard hit. The following procedure is usually adopted by all the firms in the determination of prices for katcha quality.

As soon as the bags are received by the sub-agencies, they are stored in the store house and only 10% of the number of bags are brought for sample weighment. The bags are weighed with the licensed weighman at Cuddalore because of the stipulations of the Marketing Committee. After deducting the weight of the gunny, the average weight is

calculated which is taken to represent the weight of each bag for the consignment as a whole. Out of this 10% weighed, half is taken out for sampling, i.e., for finding out the impurity content or 'refraction' as it is called. Each bag is poured out and the expert feels the amount of moisture content and examines if the stuff suffers from bad smell. These are instantaneously recorded in a note book. It is necessary to stress that these are processes over which the seller has got no control and over which the buyer's word is final. Especially in feeling the moisture content there are bound to be large differences of opinion between the buyer and the seller but over which the latter has no voice as the process is purely an estimate made by a paid servant of the firm out of experience, with no chances for verification. When the lot is named and the top of each heap flattened, samples are taken with the "Sample Swoop," one from the centre and four from the sides of the flattened heaps. When all the samples are drawn out they are sent to the analysing laboratory for analysis by the expert. The whole thing is poured on the table mixed well so that even a small quantity taken out of it may be a true specimen of the larger quantity to be bought. The seeds are spread out on the table and the surface made even. Now a small quantity of about a fixed weight of say 1,000 grams is drawn with the help of small scoops. There are certain rules as to how these samples are to be drawn but they differ from firm to firm. The quantity thus obtained is sieved and the powder removed. The sieved nuts are afterwards given to analysing chitals for finding out dirt such as stones, shells, husk, sand and the like. All these impurities go by the name of dirt which is mixed with the powder, all of which are weighed and calculated for 100 grams. Out of the remaining quantity, 100 grams is given once again for analysing chitals for sorting the nuts into damaged, shrivelled, touched, nooks, bits, small seeds, etc. When the analysing process is over, the various items are separately weighed and their weights sent to the inspector. The following illustration of the percentage of impurities will be helpful in understanding how the various items are separately recorded and price deductions made for them.

| | | | | | |
|---|---|---|---|---|---|
| (1) Brown kernels | .. | 39·6 | (5) Small seeds | .. | 3·9 |
| (2) Nooks | .. | 4·34 | (6) Touched | .. | 2·87 |
| (3) Bits | .. | 4·1 | (7) Dirt | .. | 2·24 |
| (4) Damaged | .. | 4·10 | (8) Shrivelled | .. | 0·64 |

The contract form stipulates the percentage of impurities allowable. Deductions in prices will be made as per the clauses of the contract form.

The relationship between the prices of katcha and the pucca qualities as well as the percentages of the pucca prices paid to sellers of katcha goods can be seen from the following two tables.

| *Months.* | *Cuddalore market katcha prices.* | *Madras prices.* |
|---|---|---|
| 1940. | | |
| June | 25 10 6 | 27 12 0 |
| July | 21 12 0 | 23 15 0 |
| August | 20 14 7 | 24 0 9 |
| September | 22 12 7 | 25 3 2 |
| October | 22 5 6 | 24 5 0 |
| November | 18 5 0 | 20 15 0 |
| December | 16 12 0 | 20 4 0 |

*Average Price for Katcha produce as percentage of Pucca quality.*
(Taken for 1st week of certain months of 1940, for a few stations)

| | 7–9–'40 | 5–10–'40 | 2–11–'40. | 7–12–'40. | 4-1-'41. |
|---|---|---|---|---|---|
| Cuddalore .. | 88 | 89 | 89 | 76 | 83 |
| Tindivanam .. | 96 | 95 | 94 | 89 | 89 |
| Tirukoilur .. | 94 | 94 | 90 | 76 | 83 |
| Villupuram .. | 97 | 92 | 90 | 81 | 88 |
| Ulundurpet .. | 88 | 91 | 90 | 75 | 84 |
| Vriddhachalam .. | 87 | 92 | 92 | 78 | 84 |
| Chinna Selam .. | 91 | 95 | .. | .. | .. |
| Panruti .. | 92 | 89 | .. | .. | .. |

The table brings out the important fact that the katcha goods receive a low percentage of pucca prices during the month of December. This is explained generally as being due to the bringing of uncleaned stuff to the market immediately after the harvest is over. It is possible to infer from the same table that when the ryots take some time to cleanse the produce and then bring it to the market they are better rewarded. The absence of such information for a full year makes it impossible for us to find out the best season for the cultivator to dispose of his produce.

## Section XII

## FINISHED PRODUCTS

It has been shown in the section on export trade that nearly as much as two-thirds of the total production are being retained inside the country while the rest is exported in the form of kernels. Since a substantial portion of the quantity retained is consumed in a raw form, the development of the manufacturing industries of this important raw produce is greatly affected. It may not be an exaggeration to say that oil pressing and other allied industries have scarcely made any headway. The chief among the reasons for this tardy progress are :—Firstly the external demand is for kernels only and this has been the most important factor standing in the way of the development of manufacturing industries. In the south, which is by far the most important groundnut producing area, the use of the oil for edible purposes is greatly limited by the popularity of cocoanut and gingelly oils. The use of the cake also is greatly restricted because of its cost. Still some quantity of oil and cake is being produced in this country and exported as is shown by the following figures.

*Export of groundnut oil and cake.*

(1000 tons)

| | Oil[1] | Cake[2] |
|---|---|---|
| 1930 .. .. .. | 0·6 | 172 |
| 1931 .. .. .. | 1·7 | 182 |
| 1932 .. .. .. | 2·2 | 184 |
| 1933 .. .. .. | 4·6 | 159 |
| 1934 .. .. .. | 1·4 | 190 |
| 1935 .. .. .. | 2·7 | 262 |
| 1936 .. .. .. | 4·2 | 194 |
| 1937 .. .. .. | 9·9 | .. |

1. Vegetable Oils and Oil-seeds, Imperial Economic Committee, 1938.
2. Statistical Abstract for British India.

Even in the days of a great slump in prices, the oil industry will be a profitable concern, unless there be a heavy decline in the demand for cake. When crushed, 2½ candies of groundnut will yield one candy of oil and 1½ candies of cake. The cost of crushing in the hand-press comes to about Rs. 10, the total cost amounting to Rs. 60 when groundnut sells at Rs. 20 per candy. One candy of oil and 1½ candies of cake fetch Rs. 48 and 16 respectively leaving a clear profit of Rs. 4. This is the relationship that may be said to be working out to-day. But on ordinary occasions, greater profits can be expected as cake will sell at a better price. Because of the war the export of cake has been much restricted. Further the export of Madras-made expeller-cake to the markets supplied formerly by the interior has caused a glut in the interior market pushing its prices so low as to leave a very low margin of profit for the oil industry. But for the higher price realised through oil, oil extraction would not have been possible today. It may be noted that while oil extracted through an expeller sells at a premium over oil extracted through a press the expeller-cake is valued less than the cake produced by the press, as the latter contains a higher percentage of oil. It may be also noted that whereas the cost of extraction for the expeller comes to about Rs. 8, it costs as much as Rs. 10 for the press. On the whole, extraction through the expeller offers greater profit than extraction with the aid of the press, as may be seen from the working sheet shown below.

| | Cost of 2½ candies of nuts | Labour charges. | Total cost | Selling price of Oil | Selling price of Cake | Total s.p. | Net profit |
|---|---|---|---|---|---|---|---|
| | Rs. | Rs. | Rs. | | | Rs. | Rs. |
| Press: | 50+ | 10 | 60 | 1 candy =Rs. 48+ | 1½ candies cake Rs. 16 | 64 | 4 |
| Expeller: | 50+ | 8 | 58 | 1¹⁄₁₆ candies =Rs. 53+ | do. Rs. 11 | 64 | 6 |

Oil is extracted in a variety of ways, from the most antiquated to the most modern. Oil extraction by 'chekku' is the common mode adopt-

ed in villages all over the country. In towns and urban areas the press as well as the expeller are used. The plates in this book show the chekku, parts of the press and important sections of the expeller. The press requires much manual labour while the expeller is power driven.

While some progress has been made in the direction of improving the extraction of oil to satisfy the local as well as the limited foreign demand, the refining of vegetable oil is scarcely known in India. If oil is to be useful for industrial purposes, refining is very essential.

There are many promising outlets for the manufacture of groundnut oil of all grades. Besides being an illuminant and a lubricant, it is also greatly used in the soap-making and paint industries. If the oil is hardened into a solid or semi-solid state, there will be a large outlet for it in the textile industry as it can replace tallow now used in that industry. It has been recently found out that vegetable oils along with mineral oils make excellent compound lubricants. There is also a new demand for groundnut oil in the manufacture of ghee and butter substitutes. The manufacture of margarine which has not been attempted so far in India offers another scope for an industrial adventure. Refined and deodorised groundnut oil is also used for cooking. It has to be admitted that the use of groundnut oil for soap manufacture is limited as it yields only soft soaps while the case for glycerine extraction offers a lucrative avenue of industrial activity. Next to the cocoanut oil, groundnut oil contains the largest percentage of glycerine. For sometime there was a somewhat crude glycerine plant attached to the Kerala Soap Institute working at full capacity during the last war. But the high cost of evaporating oil and the fall in the price of glycerine in later years sealed the fate of the plant. At present there is a considerable demand for glycerine, and already some premier oil concerns have started working glycerine plants for the extraction of crude as well as the distilled qualities. The Tata Oil Mills in Cochin have succeeded in the operation of their glycerine plant and it is said that they are contemplating some expansion. In Mysore also the Government Soap factory has established one. The wide scope that this industry offers seems to have been fully understood in Calcutta where there is a perceptibly brisk activity in starting new ventures. Full advantage may be taken of the fact that cordite factories with their demand for this product would be regular customers.

Medically vitaminized groundnut oil containing vitamins A and D is recommended as a substitute for cod-liver oil.

The use of groundnut meal with oil content of 5 to 8 per cent has been advocated as a substitute for wheat flour in the manufacture of bread and biscuits. Of all the known oil-cakes, the groundnut cake serves as an excellent cattle food, as it contains the highest amount of proteins. Moreover, these proteins are more easily digested than those of other cakes. "The cakes from non-decorticated nuts contain 5·35 per cent of Nitrogen and 0·9 per cent of phosphoric acid; cakes from decorticated nuts contain 7·9 per cent of nitrogen and 1·35 per cent of phosphoric acid." The cakes from damaged and mouldy nuts are used as manure.

From the husk of the groundnut can be prepared Furfuraldehyde, which is utilized in the synthesis of carbohydrates. Besides, the carbonized husk may be used in the manufacture of activated carbon.

In view of these uses to which the groundnut products can be put, is it not pertinant to ask why the oil and allied industries should not be started especially at a time when the "surplus commodity" makes the raw produce available at a cheap rate?

## Section XIII

## CONCLUSION

The effect of the present war on the Indian groundnut trade has been dealt with at some length in the sections on export trade and prices. It was shown how the Continental markets have a major share in the export trade of Indian groundnut and how in the year in which the war broke out, there was an extraordinary demand in the off-takings of Continental countries. These together with other causes resulted in an increase in prices in the first few months of the war. The aim of the present section is to examine the effects of all these factors and to assess the usefulness and practicability of the schemes that have been suggested to solve the difficulties caused to the trade.

With the expansion of the trade in 1938-39 and the increase in prices running up to the first quarter of the next year, the impact of the war on groundnut trade was great enough to exercise some influence in the cultivation of the next year's crop. In Madras alone the area under cultivation of groundnut increased from 2,863,200 acres to 3,142,000 acres for 1940, according to the latest forecast issued by the Government of Madras. In the natural course of events, the increased production of the crop should have gone to all the markets that were importing groundnut in the previous year; but the tightening of the blockade, the fall of France, the lack of shipping space and many other facts, which need no repetition, all changed the complexion of the war so much, that the trade was threatened with serious repercussions. The decline in the foreign demand resulted in pushing prices down; and this tendency was greatly accelerated by the anxiety of those merchants, who had stored some goods in expectation of better prices, to dispose of the stock and thereby prevent themselves from utter ruin. Prices began to swing down; and from Rs. 33 in May it descended by steep gradations to Rs. 20 in November and December when the heavy production of the increased acreage made itself felt. Thus one disaster following close on the heels of another, resulted in a serious glut in the Indian market, tending to force prices down to the rock bottom level of Rs. 20 in December, 1940. Exporting firms felt the serious shrinkage in markets and lack of sufficient shipping space; merchants found the demand quite unattract-

ive; and the cultivators had to face the difficulty of securing prices that would compensate the cost of cultivation, for while the cost of cultivation was Rs. 20 for even an unirrigated crop, they received a price of about Rs. 16 only incurring a loss of about Rs. 4 per acre.

This serious situation could have been averted to some extent if groundnut could be stored in suitable warehouses. But groundnut cannot be stored for a long time in kernels without serious loss to quality and quantity; and secondly there was no warehousing system worth the name.

It was under such circumstances that the Government of India became conscious of the seriousness of the situation and tried their best to avert the catastrophe. Quickly realising the situation, they sought the help of the various Chambers of Commerce in the country with a view to devising possible remedial measures to deal with the problem of 'surplus commodities.' The Economic Adviser to the Government of India also toured important producing centres with a view to getting first-hand knowledge of the situation.

Dr. T. E. Gregory, the Economic Adviser, came to the conclusion that the remedy equal to the malady was the adoption of a policy of restricting the cultivation of groundnut crop; but even if the scheme had been put into force, it would have required all the power in the hands of the Government to push it through and, even then, success would have been doubtful.

The Indian agriculturist is strongly conservative in outlook with no desire to deviate from the methods and vocations handed down to him by generations of his fore-fathers and unwilling at the risk of some loss to break open new ground. That this is not an exaggeration may be understood from his hesitation to benefit even by the advanced methods of cultivation and manuring propaganda of the agricultural department. Any attempt to make him change his ways in preference to modern methods, is foredoomed to failure.

Again it is not all cultivators that could abandon the crop. Even in the small survey conducted by us we came across a number of agriculturists with a very small acreage devoted to the cultivation of groundnut. For them life was dependent on its cultivation. A just scheme of restrictionism should have provided for exemption of such people and

if exemptions are granted on the various scores of financial inability, soil and climatic conditions and other factors enumerated above, the scheme will defeat its own aim.

There was again the possibility that agriculturists would not respect the scheme. For aiming as it does at an increase in prices, if the restriction scheme had been successful, the increased price would itself be a temptation for the illiterate agriculturist to take to groundnut. Under such circumstances unless the scheme is enforced with penal measures, its success is highly problematical; but penal measures are not advisable.

The Delhi conference wherein the representatives of the Government of India and those of the Governments of Madras, Bombay and Hyderabad, met to consider the groundnut situation and device suitable remedies for the difficulties, happily came to the conclusion that it was not practicable to enforce the restriction of output by compulsion, although it favoured the policy of carrying on propaganda directed towards such restriction. The conference was of the view that the low prices prevalent would themselves act as an effective deterrant. Though the Delhi conference did not approve of the direct policy of restrictionism, the Government evolved a modest but careful plan of restrictionism which suffers in a greater or lesser measure from all the defects and difficulties of the original proposal. This new proposal was the outcome of an anomalous situation that arise in the meantime.

In view of the fact that a greater number of foreign markets had been shut out on account of the war, and out of sympathy with the demands of the Indian groundnut trade, it was decided that the British Ministry should undertake to buy substantial quantities of the supplies available in the market at a certain minimum price either as oil or as kernels or as unshelled seeds. The Government of India were able to fix the minimum price at £10 per ton with the Food Ministry from September last and thus were able to satisfy, partially at least, the claims of the Indian groundnut trade. But the purchases made by the Ministry of Food were of such a small quantity, that they did not effectively relieve the glut in the Indian market. With the coming of the new crop, prices went down so low that there was a large difference in the price prevailing in the internal market and the guaranteed price received by the shippers. The 'katcha' quality was sold for about Rs. 16 whereas the shipping firms were receiving about Rs. 27 for the 'pucca' exported. Even allow-

ing for the difference in quotation as to quality, a sum of Rs. 3 or 4, still a huge profit is made by the exporting firms. Thus, in spite of the aim of the Food Ministry to help him, the Indian agriculturist has not been benefitted; for if allowances are made for railway freight, handling charges, market dues, decorticating expenses, interest, commission and so on, he ultimately receives only Rs. 12 to Rs. 13 per candy. On the other hand, it was the organised middlemen, viz., exporters who exploited the situation.

The Government of India, which observed this anomalous condition prevailing, thought of a way to get over the awkward situation and put forward a scheme of rebates. It was proposed to collect from shippers selling to the British Ministry of Food at the contract prices, 15s. to 20s. according to the port from which the export was made, and to dispose of the fund so collected amongst the agriculturists. The Government's decision to pay growers was sound on principle; for even if they had insisted upon the exporting firms paying the prices that the Food Ministry had fixed, on account of the fact that the off-takings were only very small compared to total output, "the result would have been in effect nothing but an unfair and fortuitous advantage to a small body of growers over the greater number of their brother producers whose product passed into the market for local consumption."

Even this scheme of subsidy would not be an effective remedy for overproduction, unless it is related to some measure of restriction of cultivation. Hence, it was suggested that the fund made available as rebates, supplemented by contributions from interested Provinces and States should be utilised to compensate such producers as are willing to submit to restriction.

The scheme of subsidy may have the approval of a certain section of cultivators from the broader point of view of benefit to the country; but one cannot feel happy over it. It is our earnest opinion that any policy of restrictionism is quite unsuited to a country like ours where the *per capita* income is lamentably low. The way to prosperity is not by reducing the total production of goods but by devising means of increasing and utilizing them in all possible ways.

There are only two ways out of this problem, the one being the resort to alternate crops and the other the utilisation of the surplus goods internally. There are, however, difficulties in raising alternate crops.

Apart from the conservatism of the cultivator, the soil itself seems greatly to hinder the growth of alternate crops. Certain soils are fit only for the cultivation of certain crops and such soils cannot be fruitfully turned to other uses. The soil required for the cultivation of groundnut is of such a nature that it is hardly suited to anything except a restricted number of other commercial crops, such as jowar and cotton. In Cuddalore, where many of the cultivators have been willing to change over for Cambodia cotton for a long time past, farmers have expressed the view that the soil has been causing some difficulties.

Even if this difficulty is overcome in suitable ways, it will not improve the situation. For "this is a time when almost all crops are in the same unhappy position of requiring to find a buyer; and it is hard to devise an entirely new crop which can replace an existing crop to any extent whatsoever and fetch a return which is satisfactory. On the other hand, if it is only adjustment of present crops, if groundnut is replaced by millet, or cotton is replaced by tobacco and so on, it would only convert a groundnut problem into a tobacco problem and there can be no effectual relief to the country as a whole."*

Thus the easiest and the best way of utilising surplus commodities is to increase the internal demand. And this can be done either by increasing the consumption of the raw commodity as such or by converting the surplus into manufactured products. The latter is the more desirable course as it would open out a large field of industrial activity and also establish a consumer for the Indian produce near at hand. A failure to solve this problem this way would indicate only a failure to understand the way to national progress. It cannot be denied that India can never see a more opportune moment for developing her industries than the present one. To miss this time is to miss a golden opportunity. The ways in which groundnut could be utilised for other purposes have been dealt with in the section on finished products and hence need not be repeated here.

A few other problems of groundnut trade not solely due to war but greatly responsible for the prosperity of the cultivator as well as for the Indian traders, may be emphasised here. Traders complain that the refraction analysis is strict and there is much dis-

* Southern India Chamber of Commerce reply to Government communication, Dec. 1940, p. 342.

parity between the percentage of refraction enjoyed by exporting firms in the foreign markets and the percentage allowed to Indian merchants. There is also another cry that while the Bombay agencies of the exporting firms allow a greater percentage of refraction, the agencies in South India do not show the same consideration; and the disparity in the percentage of refraction allowed gives rise to a deflection of trade. Regarding the first disparity, it is said that while the exporting firms enjoy nearly 4% of refraction with the Continental and foreign buyers, they extend only 2% of refraction to Indian traders. Though it cannot be ascertained how far this representation is true, it is needless to stress that the refraction basis needs to be carefully revised in view of a similar disparity known to be prevalent in the linseed trade according to the Marketing Report of Linseed. Further, the contract forms used are so one-sided that they call for the earliest revision. The necessity to carry these reforms are urgent and essential, for it is only when the conditions of the traders are bettered they may be able to pass on any benefit to millions of agriculturists now engaged in the cultivation of the crop.

Even regarding the analysing process itself, various reforms have to be carried out. Much ill-will prevails between the sellers and buyers regarding the honesty of the process carried by the latter. The way out of it consists in entrusting the work to an impartial board. This can be achieved by the Government employing a Marketing Analyst in every centre under the auspices of the Marketing Committee functioning there, and making his decision binding on both parties. If this is not possible the traders of each area may be organised by the Marketing Committee and made to establish a parallel analysing laboratory like the one maintained by the exporting firm so that the samples may be analysed here also. Then they could insist on the buyer accepting the average percentage of the two analyses. This would be a fair method and can be easily achieved by the Marketing Committee. The Marketing Committee should never forget that it is as much their duty to be of service to the traders as they are to the agriculturist, for it is then only, as we said before, that lasting benefit can be conferred on the agriculturist.

It is noteworthy that there are not any Indian exporting firms in Cuddalore. Hence, the foreign exporting firms exercise a monopolistic control. The difficulties of starting an Indian con-

cern are tremendous; not only has the new concern to face the terrific competition of the established ones, but it has necessarily to be a small one in the beginning and will accordingly be unable to deal directly with the more than 40 countries to which the produce from Cuddalore is exported. To remedy the present situation, we would suggest the starting of a co-operative sellers' organisation, somewhat like the now defunct Central Sales Society, and make the exporting firms accept the society as their agent in that area. In that case, much of the profit now going to the foreign firms in the way of refraction and direct reduction in prices, can be made to reach the poor peasant.

In conclusion, it may be said that the problem of the cultivation, marketing and utilization of groundnut bristles with many difficulties; and these difficulties have been critically accentuated by the war. But it should be conceded that the Commerce Department of the Government of India have been earnestly attempting to bring relief to the cultivator as much as possible. Presiding over the Export Advisory Council on May 14, 1941, the Commerce Member to the Government of India, announced that His Majesty's Government has consented to credit to the Indian Government a fund equivalent to £ 100,000 being the difference between the contract price and the actual price of groundnut during the period from January 12th to the end of April, 1941. However, it may be said that there is need for a more comprehensive plan to offer adequate facilities to growers to introduce alternate crops and enable them to get a fair-price for their produce, to provide improved marketing facilities and lastly to give ample scope for the development of such industries as will help to absorb the raw product.

# APPENDICES

# APPENDIX A

## Table I

### Estimated Acreage of Groundnut in the Principal Producing Countries*

(Millions of acres)

| Countries | 1924 | 1925 | 1926 | 1927 | 1928 | 1929 | 1930 | 1931 | 1932 | 1933 | 1934 | 1935 | 1936 | 1937 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **EMPIRE COUNTRIES** | | | | | | | | | | | | | | |
| India ... | 2·9 | 4·0 | 4·3 | 5·4 | 6·4 | 5·7 | 6·4 | 5·3 | 6·8 | 7·6 | 5·1 | 5·1 | 6·6 | 8·6 |
| Burma ... | ... | ... | ... | ... | ... | ... | 0·6 | 0·4 | 0·5 | 0·6 | 0·6 | 0·6 | 0·7 | 0·8 |
| Nigeria ... | ... | ... | ... | ... | ... | ... | 0·6 | 0·8 | ... | ... | ... | ... | ... | ... |
| Tanganyika ... | ... | ... | ... | ... | ... | ... | 0·065 | 0·08 | 0·1 | 0·1 | 0·1 | 0·1 | 0·1 | 0·2 |
| **FOREIGN COUNTRIES** | | | | | | | | | | | | | | |
| China ... | ... | ... | ... | ... | ... | ... | 2·3 | ... | ... | 3·8 | 3·5 | 3·3 | 3·4 | 3·6 |
| Senegal ... | 1·2 | 1·2 | 1·5 | 1·2 | 1·3 | 1·6 | 1·7 | 1·5 | 1·6 | 1·6 | 1·6 | 1·7 | 1·6 | ... |
| United States ... | 1·2 | 1·0 | 0·8 | 1·1 | 1·2 | 1·4 | 1·1 | 1·4 | 1·6 | 1·4 | 1·6 | 1·7 | 1·7 | 1·6 |
| Netherlands East Indies.. | 0·5 | 0·5 | 0·5 | 0·5 | 0·6 | 0·5 | 0·6 | 0·5 | 0·5 | 0·5 | 0·5 | 0·4 | 0·5 | 0·5 |
| French Sudan ... | ... | ... | ... | ... | ... | ... | 0·2 | 0·3 | ·4 | 0·3 | 0·4 | 0·4 | 0·4 | ... |
| Ivory Coast (French) ... | ... | ... | ... | ... | ... | ... | 0·06 | 0·1 | 0·04 | 0·2 | 0·2 | 0·3 | 0·3 | ... |
| Belgian Congo ... | ... | ... | ... | ... | ... | ... | 0·3 | 0·1 | 0·2 | 0·2 | ... | ... | ... | ... |
| Cameroons (French) ... | ... | ... | ... | ... | ... | ... | 0·1 | 0·1 | 0·1 | 0·1 | 0·1 | 0·2 | 0·2 | ... |
| Argentina ... | 0·1 | 0·1 | 0.1 | 0·1 | 0·1 | 0·1 | 0·1 | 0·1 | 0·2 | 0·2 | 0·1 | 0·2 | 0·2 | ... |
| Kwantung ... | ... | ... | ... | ... | ... | ... | 0·09 | 0·08 | 0·08 | 0·08 | 0·09 | 0·09 | 0.09 | ... |
| French Equatorial Africa | ... | ... | ... | ... | ... | ... | 0·03 | 0·03 | 0·03 | 0·03 | 0·06 | 0·08 | ... | ... |
| Formosa ... | ... | ... | ... | ... | ... | ... | 0·06 | 0·06 | 0·06 | 0·07 | 0·07 | 0·07 | ... | ... |

* Compiled from "Survey of Oil-seeds and Vegetable oils," Vol. III.

## Table II

### Area under Groundnut crop cultivated in each Province *

| Provinces | 1920–21 | 1921–22 | 1922–23 | 1923–24 | 1924–25 | 1925–26 | 1926–27 | 1927–28 | 1928–29 |
|---|---|---|---|---|---|---|---|---|---|
| Ajmer-Merwara ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Assam ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Bengal ... | 100 | 300 | 500 | ... | 400 | 400 | 600 | 800 | 500 |
| Bihar and Orissa ... | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 300 |
| Bombay and Sind ... | 204,675 | 272,847 | 329,679 | 359,404 | 344,404 | 595,588 | 602,408 | 740,316 | 999,823 |
| Burma, Upper and lower ... | 302,955 | 305,789 | 332,477 | 390,129 | 461,856 | 498,587 | 523,118 | 540,071 | 598,870 |
| C. P. and Berar ... | 9,624 | 15,352 | 18,024 | 22,934 | 30,466 | 59,686 | 44,020 | 70,073 | 103,099 |
| Coorg ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Delhi ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Madras ... | 1,599,738 | 1,459,122 | 1,754,334 | 1,807,353 | 1,904,119 | 2,598,609 | 2,680,156 | 3,336,536 | 3,679,349 |
| N. W. F. Province... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Punjab ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| United Provinces ... | 6670 | 7589 | 6729 | 6322 | 13,018 | 14410 | 12,984 | 12,245 | 19,558 |
| Total including Manpur Pargana ... | 2,123,962 | 2,061,199 | 2,441,943 | 2,586,342 | 2,754,463 | 3,767,480 | 3,863,486 | 4,700,241 | 5,401,499 |

* *Vide* "Agricultural Statistics of India" Vol. I.

Table II—*Continued*

| Provinces | | 1929-30 | 1930-31 | 1931-32 | 1932-33 | 1933-34 | 1934-35 | 1935-36 | 1936-37 |
|---|---|---|---|---|---|---|---|---|---|
| Ajmer-Merwara | ... | ... | 632 | ... | ... | ... | ... | ... | ... |
| Assam | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Bengal | ... | 500 | 700 | 300 | 700 | 1800 | 400 | 3100 | 2700 |
| Bihar | ... | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | ... | ... |
| Bombay and Sind | ... | 1,067,758 | 999,077 | 989,224 | 1,194,639 | 1,291,776 | 862,341 | 891,671 | 987,046 |
| Burma | ... | 570,610 | 564,523 | 408,309 | 521,850 | 640,188 | 624,558 | 660,141 | 764,600 |
| C. P. and Berar | ... | 139,088 | 147,766 | 164,333 | 185,296 | 194,138 | 148,561 | 133,700 | 148,614 |
| Coorg | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Delhi | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Madras | ... | 3,209,315 | 3,575,157 | 2,635,427 | 3,516,679 | 3,779,365 | 2,350,934 | 2,519,965 | 3,495,023 |
| N. W. F. Province | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Punjab | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| United Provinces | ... | 23,922 | 21,399 | 27,214 | 47,609 | 40,424 | 55,830 | 87,947 | 106,945 |
| Orissa | ... | ... | ... | ... | ... | ... | ... | 10,207 | 11,943 |
| Sind | ... | ... | ... | ... | ... | ... | ... | 14 | 10 |
| Total | ... | 5,012,393 | 5,310,454 | 4,226,008 | 5,467,973 | 5,948,891 | 4,043,824 | 4,306,745 | 5,516,881 |

[*N. B.* Bihar means :—Bihar & Orissa in 1930—31—32—33—34 and 35.]

## Table III

### Acreage under Groundnut in the Madras Presidency

(Compiled from Season and Crop Report)

| Year | Anantapur | Cuddapah | Godavari | Krishna | South Arcot | Chingelput |
|---|---|---|---|---|---|---|
| 1914-15 | 262764 | 160577 | 57 | 3356 | 410123 | 44541 |
| 15-16 | 159338 | 100805 | 44 | 2667 | 29[illegible]035 | 21929 |
| 16-17 | 299903 | 201633 | 182 | 1440 | 355854 | 27516 |
| 17-18 | 168857 | 62944 | 114 | 955 | 332791 | 25296 |
| 18-19 | 40765 | 36106 | 65 | 807 | 303464 | 23792 |
| 19-20 | 68577 | 103407 | 24 | 1021 | 335350 | 22690 |
| 20-21 | 118370 | 144298 | 16 | 2091 | 438793 | 32590 |
| 21-22 | 108905 | 130094 | 11 | 2105 | 386659 | 25035 |
| 22-23 | 129109 | 194925 | 25 | 12832 | 384614 | 25395 |
| 23-24 | 158986 | 170378 | 44 | 13187 | 372893 | 30071 |
| 24-25 | 105360 | 137539 | 4384 | 7220 | 421969 | 34097 |
| 25-26 | 172498 | 223598 | 8300 | 8070 | 465954 | 52129 |
| 26-27 | 255903 | 251366 | 5448 | 8503 | 396841 | 50279 |
| 27-28 | 349455 | 270264 | 5359 | 15101 | 453282 | 56155 |
| 28-29 | 425439 | 272134 | 4730 | 26556 | 482978 | 58611 |
| 29-30 | 211011 | 163593 | 3034 | 30035 | 455721 | 62160 |
| 30-31 | 349557 | 235673 | 4317 | 52441 | 458750 | 50948 |
| 31-32 | 247702 | 183390 | 3264 | 43755 | 337745 | 27725 |
| 32-33 | 343535 | 264805 | 3856 | 70786 | 335235 | 33840 |
| 33-34 | 446507 | 229478 | 6612 | 109324 | 381960 | 38956 |
| 34-35 | 254055 | 126276 | 5414 | 92131 | 289794 | 33601 |
| 35-36 | 180308 | 117429 | 11080 | 102473 | 374869 | 41416 |
| 36-37 | 315639 | 202929 | 22592 | 160237 | 429814 | 65801 |
| 37-38 | 446448 | 287336 | 56136 | 208231 | 471274 | 808[illegible]8 |
| 38-39 | 318069 | 184912 | 36103 | 162641 | 425725 | 71065 |

## Table III—*Continued*

| Year | Ganjam | Vizagapatam | North Arcot | Chittoor | Trichy | Madura | Tinnevelly | Tanjore |
|---|---|---|---|---|---|---|---|---|
| 1914-15 | ... | 32045 | 22926 | 30333 | 97943 | 67557 | 311 | 77501 |
| 15-16 | ... | 24533 | 125671 | 23011 | 76014 | 34025 | 218 | 64912 |
| 16-17 | ... | 29302 | 184577 | 23943 | 92822 | 50554 | 313 | 74727 |
| 17-18 | ... | 27940 | 178408 | 27925 | 95187 | 53043 | 528 | 77781 |
| 18-19 | ... | 34405 | 180165 | 27799 | 89243 | 34602 | 621 | 68305 |
| 19-20 | ... | 35387 | 146889 | 28266 | 93190 | 43287 | 1179 | 74036 |
| 20-21 | 22216 | 38155 | 221705 | 38068 | 88176 | 68643 | 3003 | 87092 |
| 21-22 | 20739 | 43219 | 208779 | 3353 | 90424 | 45315 | 2197 | 81962 |
| 22-23 | 24948 | 50089 | 232679 | 43385 | 103198 | 62721 | 2339 | 8[illegible]743 |
| 23-24 | 23252 | 59903 | 213275 | 49794 | 89026 | 48151 | 2347 | 83244 |
| 24-25 | 30740 | 69514 | 255970 | 56783 | 92416 | 49211 | 2575 | 83473 |
| 25-26 | 35088 | 89507 | 363845 | 88312 | 114702 | 53015 | 3909 | 95096 |
| 26-27 | 37017 | 91399 | 363820 | 108852 | 94142 | 49784 | 3481 | 90232 |
| 27-28 | 43626 | 88494 | 460984 | 138078 | 115307 | 70574 | 4368 | 91701 |
| 28-29 | 40714 | 96317 | 460772 | 136861 | 110971 | 76894 | 4641 | 90643 |
| 29-30 | 49427 | 112066 | 443098 | 120186 | 118790 | 91047 | 4468 | 91278 |
| 30-31 | 50893 | 133623 | 372030 | 84355 | 105970 | 101814 | 5685 | 86666 |
| 31-32 | 44218 | 131025 | 247034 | 65405 | 82558 | 55540 | 5257 | 65568 |
| 32-33 | 52054 | 117947 | 305127 | 106634 | 85641 | 92323 | 7203 | 67100 |
| 33-34 | 49985 | 126352 | 295035 | 113826 | 63300 | 129310 | 12887 | 65061 |
| 34-35 | 51034 | 126307 | 218659 | 77646 | 84723 | 60995 | 10347 | 49610 |
| 35-36 | 5339 | 170349 | 275960 | 96493 | 114782 | 64383 | 8613 | 55069 |
| 36-37 | ... | 183584 | 348560 | 141535 | 116877 | 87749 | 10707 | 62817 |
| 37-38 | ... | 205122 | 439928 | 201888 | 133634 | 161091 | 22118 | 68892 |
| 38-39 | ... | 220507 | 402333 | 174673 | 133400 | 140325 | 19178 | 63162 |

### Table III—*Continued*

| Year | Coimbatore | Salem | Guntur | Bellary | Kurnool | Nellore | Ramnad | Malabar | South Canara |
|---|---|---|---|---|---|---|---|---|---|
| 1914–15 | 82958 | 104547 | 5450 | 80716 | 132346 | ... | ... | ... | ... |
| 15–16 | 43671 | 28549 | 5667 | 29783 | 57041 | ... | ... | ... | ... |
| 16–17 | 90262 | 62953 | 5207 | 80118 | 170928 | ... | ... | ... | ... |
| 17–18 | 98273 | 75843 | 3628 | 54495 | 77593 | ... | ... | ... | ... |
| 18–19 | 41176 | 48524 | 2556 | 6923 | 12462 | ... | ... | ... | ... |
| 19–20 | 46841 | 51995 | 3729 | 5464 | 29019 | ... | ... | ... | ... |
| 20–21 | 78828 | 88945 | 6464 | 19673 | 66796 | ... | ... | ... | ... |
| 21–22 | 78623 | 66085 | 8888 | 19035 | 80043 | ... | ... | ... | ... |
| 22–23 | 108524 | 86587 | 12832 | 37561 | 137033 | ... | ... | ... | ... |
| 23–24 | 102567 | 99377 | 13187 | 64065 | 199988 | ... | ... | ... | ... |
| 24–25 | 108408 | 82602 | 36084 | 61522 | 229972 | ... | ... | ... | ... |
| 25–26 | 138679 | 130423 | 61171 | 107192 | 350109 | ... | ... | ... | ... |
| 26–27 | 125676 | 93787 | 77694 | 180623 | 357853 | ... | ... | ... | ... |
| 27–28 | 143206 | 143101 | 137772 | 279059 | 423664 | ... | ... | ... | ... |
| 28–29 | 171964 | 156029 | 221862 | 315603 | 478[illegible]89 | ... | ... | ... | ... |
| 29–30 | 174896 | 173884 | 238977 | 282275 | 328467 | ... | ... | ... | ... |
| 30–31 | 184747 | 152009 | 304834 | 332068 | 442349 | 13819 | 46507 | 2921 | 2 |
| 31–32 | 126716 | 82398 | 205281 | 237428 | 396321 | 7860 | 37166 | 2067 | 4 |
| 32–33 | 166632 | 128305 | 318258 | 340352 | 614626 | 12116 | 49073 | 1022 | 9 |
| 33–34 | 200049 | 151480 | 352879 | 416641 | 480097 | 16595 | 58854 | 1496 | 5 |
| 34–35 | 134302 | 72854 | 184905 | 158479 | 279385 | 6637 | 33178 | 1135 | 11 |
| 35–36 | 125100 | 97895 | 208367 | 109811 | 316584 | 11242 | 34828 | 898 | 15 |
| 36–37 | 141988 | 137820 | 305838 | 229899 | 468195 | 18141 | 40895 | 3393 | 13 |
| 37–38 | 200573 | 192792 | 417567 | 376724 | 591918 | — (a) | ... | ... | ... |
| 38–39 | 189442 | 161109 | 313216 | 247894 | 410864 | 32452 | 59563 | 4930 | 25 |

(a) = not available.

## Table IV

**Percentage of Area under Groundnut to the Total Area Sown * (In Madras Presidency).**

| | | 1930-31 | 1931-32 | 1932-33 | 1933-34 | 1934-35 | 1935-36 | 1936-37 | 1937-38 | 1938-39 |
|---|---|---|---|---|---|---|---|---|---|---|
| Vizagapatam | ... | 4 | 4 | 4 | 4 | 4 | 8 | 8 | ... | 10 |
| Guntur | ... | 12 | 9 | 13 | 14 | 8 | 9 | 12 | ... | 13 |
| Kurnool | ... | 21 | 18 | 28 | 22 | 13 | 15 | 22 | ... | 19 |
| Bellary | ... | 13 | 9 | 13 | 17 | 6 | 5 | 9 | ... | 9 |
| Anantapur | ... | 17 | 13 | 16 | 21 | 14 | 9 | 16 | ... | 15 |
| Cuddapah | ... | 20 | 16 | 24 | 20 | 11 | 10 | 18 | ... | 16 |
| South Arcot | ... | 29 | 22 | 22 | 25 | 19 | 24 | 28 | ... | 28 |
| Chittoor | ... | 9 | 8 | 13 | 13 | 9 | 11 | 16 | ... | 19 |
| North Arcot | ... | 25 | 18 | 21 | 21 | 16 | 19 | 25 | ... | 29 |
| Salem | ... | 8 | 4 | 7 | 9 | 4 | 5 | 7 | ... | 9 |
| Coimbatore | ... | 8 | 6 | 7 | 9 | 6 | 6 | 7 | ... | 10 |
| Trichinopoly | ... | 7 | 6 | 6 | 6 | 6 | 8 | 8 | ... | 9 |
| Tanjore | ... | 6 | 4 | 4 | 4 | 3 | 4 | 4 | ... | 4 |
| Madura | ... | 7 | 4 | 7 | 9 | 5 | 5 | 6 | ... | 10 |
| Presidency | ... | 9 | 7 | 9 | 9·7 | 6·3 | 6·9 | 9·5 | ... | 10·5 |

* *Vide* "Season & Crop Report of Madras Province"

## Table V

### Estimated Production of Groundnut in the Principal producing countries *

(undecorticated, in millions of tons)

| | 1924 | 1925 | 1926 | 1927 | 1928 | 1929 | 1930 | 1931 | 1932 | 1933 | 1934 | 1935 | 1936 | 1937 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| India | 1·4 | 1·8 | 1·8 | 2·4 | 2·8 | 2·4 | 2·5 | 2·1 | 2·8 | 3·1 | 1·7 | 2·1 | 2·7 | 3·2 |
| Burma | ... | ... | ... | ... | ... | ... | 0·1 | 0·1 | 0·1 | 0·1 | 0·1 | 0·1 | 0·1 | 0·2 |
| Nigeria | ... | ... | ... | ... | ... | ... | 0·1 | 0·2 | 0·2 | 0·2 | 0·3 | 0·2 | 0·2 | 0·4 |
| Gambia | ... | ... | ... | ... | ... | ... | ·07 | 0·06 | ·03 | 0·06 | 0·08 | 0·03 | 0·05 | 0·05 |
| Tanganyika | ... | ... | ... | ... | ... | ... | 0·02 | 0·03 | 0·02 | 0·03 | 0·02 | 0·03 | 0·03 | 0·03 |
| China | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2·9 | 2·6 | 2·2 | 2·5 | 3·0 |
| Senegal | 0·4 | 0·4 | 0·4 | 0·5 | 0·5 | 0·5 | 0·5 | 0·1 | 0·4 | 0·5 | 0·4 | 0·5 | 0.5 | ... |
| U. S. A. | 0·3 | 0·3 | 0·3 | 0·4 | 0·4 | 0·4 | 0·3 | 0·4 | 0·4 | 0·4 | 0·4 | 0·5 | 0·5 | 0·5 |
| East Indies | 0·2 | 0·2 | 0·2 | 0·2 | 0·2 | 0·2 | 0·2 | 0·1 | 0·2 | 0·2 | 0·2 | 0·2 | 0·2 | ... |
| Argentina | ... | 0·1 | 0·1 | 0.1 | 0·1 | 0·1 | 0·06 | 0·05 | 0·07 | 0·1 | 0·09 | 0·1 | 0·07 | ... |

* *Vide* Vegetable oils and oil-seeds, Vol. III.

## Table VI

### Yield of Groundnut in Provinces *

(in Thousand tons)

| | 1919-20 | 1920-21 | 1921-22 | 1922-23 | 1923-24 | 1924-25 | 1925-26 | 1926-27 | 1927-28 | 1928-29 |
|---|---|---|---|---|---|---|---|---|---|---|
| Madras ... | 569 | 740 | 678 | 823 | 744 | 948 | 1264 | 1207 | 1671 | 1830 |
| Bombay (including Indian States) ... | 151 | 167 | 177 | 287 | 213 | 361 | 549 | 649 | 860 | 1066 |
| Burma ... | 102 | 115 | 95 | 110 | 115 | 165 | 165 | 165 | 145 | 160 |
| Hyderabad ... | (a) | (a) | 9 | 16 | 12 | 11 | 21 | 25 | 42 | 63 |
| Total ... | 822 | 1022 | 959 | 1236 | 1084 | 1485 | 1999 | 2046 | 2718 | 3119 |

(a) = not available.

* *Vide* Estimate of Acreage and Yield of Principal crops in British India.

**Table VI**—*Continued*

(In Thousand tons)

| | | 1929–30 | 1930–31 | 1931–32 | 1932–33 | 1933–34 | 1934–35 | 1935–36 | 1936–37 | 1937–38 | 1938–39 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BRITISH PROVINCES. | | | | | | | | | | | |
| Bombay | ... | 426 | 487 | 498 | 579 | 643 | 375 | 418 | 407 | 523 | 556 |
| C. P. & Berar | ... | ... | (a) | 33 | 45 | 53 | 38 | 35 | 46 | 58 | 74 |
| Madras | ... | 1522 | 1765 | 1234 | 1729 | 1777 | 920 | 1202 | 1657 | 2059 | 1613 |
| Orissa | ... | ... | ... | ... | ... | ... | ... | ... | ... | (a) | 7 |
| Total Br. Provinces | ... | 1948 | 2258 | 1765 | 2353 | 2473 | 1333 | 1655 | 2110 | 2640 | 2250 |
| INDIAN STATES. | | | | | | | | | | | |
| Bombay States | ... | 87 | 175 | 173 | 173 | 263 | 156 | 144 | 252 | 348 | 368 |
| Hyderabad | ... | 145 | 165 | 213 | 320 | 374 | 224 | 287 | 316 | 476 | 537 |
| Mysore | ... | ... | ... | ... | (a) | 76 | 27 | 28 | 36 | 37 | 41 |
| Total Indian States | ... | 232 | 340 | 386 | 493 | 713 | 407 | 459 | 604 | 861 | 946 |
| Grand Total | ... | 2180 | 2592 | 2151 | 2846 | 3186 | 1740 | 2114 | 2714 | 3501 | 3196 |

(a)=not available.

## Table VII

### Yield per acre of Groundnut in each province * (In lbs.)

| | | 1919-20 | 1920-21 | 1921-22 | 1922-23 | 1923-24 | 1924-25 | 1925-26 | 1926-27 | 1927-28 | 1928-29 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Madras | ... | 1114 | 1036 | 1041 | 1051 | 922 | 1115 | 1089 | 1009 | 1122 | 1114 |
| Bombay | ... | 2088 | 1670 | 1778 | 1752 | 1193 | 2100 | 1795 | 1788 | 1811 | 1808 |
| Burma | ... | 816 | 850 | 695 | 742 | 661 | 800 | 741 | 707 | 601 | 635 |
| Hyderabad (b) | ... | (c) | (c) | 129 | 199 | 132 | 184 | 248 | 184 | 194 | 217 |
| Average | ... | 1161 | 1076 | 1002 | 1052 | 867 | 1153 | 1127 | 1061 | 1122 | 1124 |

(b) = The low out-turn is due to the crops being sown in dry lands.

(c) = Not available.

* *Vide* "Estimate of Acreage and Yield of Crops," 1928-29.

## Table VII—*Continued*

### Yield per acre of Groundnut in each province * (nuts in shell in lbs.)

| | 1929-30 | 1930-31 | 1931-32 | 1932-33 | 1933-34 | 1934-35 | 1935-36 | 1936-37 | 1937-38 | 1938-39 |
|---|---|---|---|---|---|---|---|---|---|---|
| **PROVINCES & STATES.** | | | | | | | | | | |
| Bombay ... | 893 | 1092 | 1128 | 1108 | 1115 | 974 | 1050 | 924 | 872 | 907 |
| C. P. and Berar ... | ... | (c) | 451 | 545 | 612 | 571 | 585 | 692 | 580 | 603 |
| Coorg ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Madras ... | 1062 | 1107 | 1107 | 1101 | 1058 | 877 | 1068 | 1062 | 990 | 958 |
| Orissa ... | ... | ... | ... | ... | ... | ... | ... | ... | (c) | 825 |
| Average for British Provinces ... | 1020 | 1104 (e) | 1044 | 1076 | 1052 | 888 | 1045 | 1021 | 950 (e) | 927 |
| **INDIAN STATES.** | | | | | | | | | | |
| Bombay States ... | 694 | 649 | 748 | 659 | 863 | 534 | 796 | 641 | 763 | 651 |
| Cochin ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Hyderabad (b) ... | 525 | 535 | 616 | 641 | 605 | 522 | 607 | 742 | 741 | 791 |
| Mysore ... | ... | ... | ... | (c) | 70 | 371 | 335 | 407 | 419 | 429 |
| Travancore ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Average Indian States.. ... | 577 | 588 | 669 | 647 (f) | 688 | 512 | 623 | 666 | 726 | 706 |
| Average India ... | 943 | 990 (e) | 948 | 965 (f) | 941 | 758 | 911 | 912 | 883 | 848 |

(b) = The low out-turn is due to the crop being sown in dry lands.
(c) = Excluding C. P. & Berar.
(e) = " " Orissa.
(f) = " " Mysore.
* *Vide* Estimate of Acreage and Yield of Principal Crops in British India. (1938-39).

## Table VIII

### **Warehouses** (Progress Statement)

| WAREHOUSE. | | Date of opening | Co-operative year ending | Quantity of Groundnut Sold | | Value of sale produce | Commission Collected |
|---|---|---|---|---|---|---|---|
| | | | | Candies | lbs. | Rs. | Rs. |
| Tirukoilur | ... | 6—1—1933 | 30-6-1933 | 828 | 353 | 21,227 | 207 |
| | | | 30-6-1934 | 647 | 248 | 12,283 | 162 |
| | | | 30-6-1935 | 1528 | 154 | 47,780 | 384 |
| | | | 30-6-1936 | 1471 | 437 | 46,039 | 368 |
| | | | 30-6-1937 | 2371 | 369 | 80,563 | 593 |
| | | | 30-6-1938 | 1982 | 375 | 48,740 | 496 |
| | | | 30-6-1939 | 3436 | 372 | 76,046 | 860 |
| | | | 30-9-1939 | 655 | 441 | 16,701 | 164 |
| Cuddalore | ... | 8-12-1932 | 30-6-1933 | 137 | 67 | 3,507 | 47 |
| | | | 30-6-1934 | 1509 | 24 | 28,180 | 560 |
| | | | 30-6-1935 | 2610 | 130 | 64,975 | 959 |
| | | | 30-6-1936 | 2238 | 104 | 72,849 | 831 |
| | | | 30-6-1937 | 3722 | 52 | 1,29,302 | 1404 |
| | | | 30-6-1938 | 2038 | 11 | 55,594 | 789 |
| | | | 30-6-1939 | 999 | 400 | 66,074 | 1071 |
| | | | 30-9-1939 | 320 | 328 | 8,055 | 118 |
| Vriddhachalam | ... | 14-12-1932 | 30-6-1933 | 230 | 149 | 6,083 | 58 |
| | | | 30-6-1934 | 709 | 303 | 13,798 | 181 |
| | | | 30-6-1935 | 3662 | 154 | 1,16,398 | 976 |
| | | | 30-6-1936 | 4930 | 174 | 1,56,470 | 1184 |
| | | | 30-6-1937 | 5731 | 217 | 1,95,795 | 1345 |
| | | | 30-6-1938 | 3501 | 343 | 84,858 | 878 |
| | | | 30-5-1939 | 6196 | 240 | 1,41,282 | 1554 |
| | | | 30-9-1939 | 740 | 241 | 19,317 | 270 |
| Villupuram | ... | 19-11-1936 | 30-6-1938 | 334 | 247 | 7,678 | 84 |
| | | | 30-6-1939 | 4592 | 395 | 1,13,662 | 1407 |
| | | | 30-9-1939 | 1607 | 303 | 40,748 | 481 |

The above table clearly recounts to the work done by the Warehouses.

Table IX

**Total Exports of Groundnut from all ports in India (In Thousand Tons)**

| | British Ports | Portuguese | French Ports | Kathiawar Ports | Total Exports |
|---|---|---|---|---|---|
| 1928–29 | 788 | 184 | 80 | ... | 1052 |
| 1929–30 | 714 | 146 | 97 | ... | 957 |
| 1930–31 | 601 | 165 | 70 | ... | 836 |
| 1931–32 | 472 | 90 | 37 | 10 | 709 |
| 1932–33 | 433 | 48 | 25 | 30 | 536 |
| 1933–34 | 547 | 172 | 40 | 38 | 797 |
| 1934–35 | 511 | 34 | 57 | 57 | 659 |
| 1935–36 | 413 | 58 | 46 | 48 | 565 |
| 1936–37 | 740 | 58 | 75 | 54 | 927 |

## Table X

### Distribution of Exports of Groundnut—Foreign countries

| | 1931-32 | 1932-33 | 1933-34 | 1934-35 | 1935-36 | 1936-37 | 1937-38 | 1938-39 |
|---|---|---|---|---|---|---|---|---|
| Maskat Territory & Tracial Oman.. | ... | ... | ... | 18 | 53 | 9 | 33 | 27 |
| Other Native States in Arabia ... | 40 | 33 | 40 | 32 | 22 | 10 | 24 | 88 |
| Iraq ... | 40 | 41 | 62 | 61 | 78 | 119 | 133 | 163 |
| French Indo-China ... | ... | ... | ... | ... | ... | ... | 25 | ... |
| Egypt ... | 592 | 3026 | 1916 | 3299 | 331 | 293 | 4572 | 25641 |
| Tunis ... | ... | ... | ... | ... | ... | ... | 143 | 88 |
| Morocco Fr. Protectorate ... | ... | ... | ... | ... | ... | ... | ... | 438 |
| French West Africa ... | ... | ... | ... | ... | 1909 | ... | ... | ... |
| U. S. A. (via) Atlantic coast ... | ... | ... | 1100 | 28 | 131 | 9 | 1115 | 5027 |
| ,, Pacific coast ... | ... | ... | ... | ... | ... | ... | ... | 23 |
| Uruguay ... | ... | ... | ... | ... | ... | ... | ... | 822 |
| Argentine Republic including Atlantic coast of Patagonia ... | ... | ... | ... | ... | ... | ... | ... | 1000 |
| Other Foreign Countries ... | 42 | 14 | 34 | ... | 7 | 40 | 3 | 26 |
| Total Foreign Countries ... | 591,770 | 399,061 | 485,360 | 368,697 | 344,796 | 596,618 | 507,887 | 704,671 |
| Total Export* ... | 671,973 | 433,012 | 546,276 | 487,293 | 664,389 | 650,752 | 816,253 | 835,103 |

*Note.*—The above figures have been taken from "Sea-borne Trade of India." It should be noted however that there are slight discrepancies in the figures given in the " Sea-borne Trade of India " and in the " Review of Trade of India."

## Table X—*Continued*

### Distribution of Exports of Groundnut—Foreign countries

| | 1931-32 | 1932-33 | 1933-34 | 1934-35 | 1935-36 | 1936-37 | 1937-38 | 1938-39 |
|---|---|---|---|---|---|---|---|---|
| Sweden ... | 4712 | ... | 818 | ... | ... | ... | 301 | 1210 |
| Norway ... | 4989 | 2496 | 2300 | 6201 | 2307 | 2016 | 2616 | 10012 |
| Poland (including Danzig) ... | ... | ... | ... | 1550 | ... | ... | 70 | ... |
| Denmark ... | 4133 | 1501 | 6818 | 5896 | 410 | 7044 | 5116 | 22902 |
| Germany ... | 121751 | 48129 | 97249 | 65116 | 71268 | 110056 | 107977 | 115210 |
| Netherlands ... | 147192 | 87474 | 100855 | 114813 | 95161 | 175435 | 146455 | 231676 |
| Belgium ... | 4457 | 8627 | 13491 | 13951 | 9196 | 38731 | 43730 | 65782 |
| France ... | 223241 | 219447 | 188080 | 99262 | 140697 | 172973 | 72345 | 149783 |
| Spain ... | 100 | ... | ... | ... | 4 | 2000 | 21 | ... |
| Portugal (including Azores & Madeira) ... | ... | ... | ... | 3709 | 4251 | 8896 | 5029 | 5236 |
| Switzerland ... | ... | ... | ... | ... | ... | ... | 665 | 400 |
| Italy (including Fiume) ... | 80344 | 28214 | 72413 | 54370 | 17765 | 76140 | 111647 | 34576 |
| Austria ... | ... | ... | ... | ... | ... | ... | 185 | ... |
| Czechoslovakia ... | ... | ... | ... | ... | ... | ... | 4722 | 33272 |
| Greece (including Crete) ... | 35 | 10 | 268 | 325 | 537 | 365 | 157 | 8 |
| Turkey (Asiatic) ... | 7 | ... | 4 | 5 | 650 | 2380 | 554 | 10 |
| Syria ... | 95 | 49 | 182 | 61 | 9 | 52 | 249 | 1039 |

## Table X—*Continued*

### Exports of Groundnut—British Empire

| | 1931-32 | 1932-33 | 1933-34 | 1934-35 | 1935-36 | 1936-37 | 1937-38 | 1938-39 |
|---|---|---|---|---|---|---|---|---|
| United Kingdom (including Channel Islands) ... | 77,933 | 31,643 | 52,821 | 134,196 | 62,399 | 134,930 | 94,624 | 96,406 |
| Palestine ... | 90 | 1083 | 4947 | 2050 | ... | 4313 | 3752 | 7568 |
| Aden & Dependencies ... | 36 | 38 | 37 | 35 | 40 | 41 | 68 | 280 |
| Ceylon (excluding Maldives) ... | 523 | 389 | 637 | 626 | 935 | 497 | 700 | 908 |
| Burma ... | ... | ... | ... | ... | ... | ... | 5530 | 11,841 |
| Straits settlements ... | 193 | 67 | 674 | 3475 | 287 | 571 | 2027 | 1,691 |
| Federated Malay States ... | ... | ... | 132 | 205 | 437 | 503 | 356 | 112 |
| Hong Kong ... | ... | ... | ... | ... | ... | 14 | 581 | 150 |
| Union of South Africa ... | 1400 | 700 | 950 | 700 | 1996 | ... | 877 | 7,102 |
| CANADA : | | | | | | | | |
| (*via*) Atlantic coast ... | ... | ... | 4 | 236 | 702 | 1470 | 2359 | 3,722 |
| Pacific coast ... | ... | ... | ... | ... | ... | ... | 45 | 295 |
| Newfoundland & Labrador ... | ... | ... | ... | ... | ... | 30 | ... | ... |
| British West India Islands (excluding Bahamas) ... | 18 | 17 | 3 | ... | 4 | 50 | 89 | 80 |
| British Guiana ... | ... | ... | ... | ... | ... | 10 | 103 | 36 |
| Commonwealth of Australia ... | ... | ... | 672 | 916 | 930 | 400 | 350 | 178 |
| Other British Provinces ... | 10 | 14 | 39 | 58 | 41 | 36 | 22 | 63 |
| Total British Empire ... | 80,203 | 33,951 | 60,916 | 142,497 | 67,771 | 142,865 | 111,483 | 130,432 |

## APPENDIX B

*Abstract of the Report of the Administration of the South Arcot Groundnut Market Committee, Cuddalore, for the year ending 1940.*

A study of the seasonal rainfall is an important factor in the cultivation of the crop. According to the report, the rainfall during the year under review was heavy but not evenly distributed. Scanty showers in summer delayed the preparation of land for cultivation, and a heavy downpour in November and December flooded the fields and also damaged the crop by delaying the harvest. The quantity of blacks showed an increase while the yield per acre declined. Thus an uneven distribution of rain adversely affects not only the production of the crop but the quality of the produce.

In 1940, the area under groundnut in the Madras Presidency is estimated at 3,820,000 acres, indicating an increase of 5·6% over the former year's acreage. During the same period, South Arcot had 375,000 acres under groundnut, which is nearly 9·8% of the total area devoted to this crop in the Presidency. In 1939, this area was 400,100 acres. The 1940 figure shows accordingly a decrease of 6·3%. The year's yield per acre is also said to be only 70% of the normal yield. This lower yield has been attributed to the uncertain climatic conditions of the year under review.

Discussing the position of the trade in the district, it has been observed that out of the total arrivals in all markets in the district which amounted to 64,500 tons of kernels, the exporters purchased 90% and the local press-owners and oil-crushers consumed 7·7%. About 14,000 tons have been estimated to be reserved as seed and the consumption of the nuts as food is nearly 1000 tons. Exports by sea have come to nearly 79,211 tons of kernels while 6,801 tons have moved to Madras and other places through inland traffic. For future sale the ryots have stored 7,000 tons and the exporting firms had on hand 16,806 tons at the close of the year. The figures cannot be taken as accurate, for exact information regarding the retention of the produce in the villages for future sale and for use as seeds, for food or for crushing by local chekkus, etc., is not forthcoming.

As regards prices, it was seen that in the beginning of 1940, the prices per candy was Rs. 30-3-0. But by the end of January, it fell to Rs. 20-3-0 owing to a decrease in demand. There was no change in February and the price went up in March owing to a new but limited demand from exporters and remained at Rs. 34-7-0 till the end of April. But soon the downward trend set in. The closure of foreign markets affected exports seriously and the price went as low as Rs. 22-12-0 in August. Except for a slight rise in September, the downward trend of the price continued owing to a glut in the market resulting from restricted exports and the arrival of fresh stocks for sale. In November and December the price was Rs. 19-3-0. Concerning the future of the price of groundnut, the Committee observe:—

"It is practically impossible to forecast with any degree of certainty the future of groundnut prices under the present international situation and the outlook continues to be obscure owing to the closure of Continental markets and the consequent falling off in export demand."

To increase the number of regulated markets, the Committee recently opened a market yard at Villupuram. This brings the number of such markets in the district to six. A comparative statement of the total quantity of groundnuts dealt within the market yards is given below:—

| Markets. | No. of premises doing business. | Arrivals in 1940. | | Percentage. |
|---|---|---|---|---|
| | | Market Centre (Tons). | Market. yard (Tons). | |
| Cuddalore .. | 21 | 10,275 | 495 | 4·8 |
| Ulundurpet .. | 13 | 8,800 | 938 | 10·7 |
| Vriddhachalam .. | 17 | 8,950 | 520 | 5·8 |
| Tirukoilur .. | 20 | 7,000 | 710 | 10·1 |
| Villupuram .. | 8 | 19,500 | 760 | 4·0 |
| Tindivanam .. | 30 | 10,000 | 766 | 7·7 |

The arrivals at the market yard were satisfactory; but they would have been better if unhealthy competition from certain interested quarters and the antagonistic attitude of some of the traders could have been

avoided. It is hoped that in subsequent years, the arrivals at the market yards will greatly increase, as the cultivators have already begun to understand the efficacy of the regulated market.

The petty traders found the license fees to be heavy and made a representation to this effect to the Committee. The licence fees have now been reduced. The following figures show the number of licences and registrations issued by the Market Commitee:—

| | | 1940 |
|---|---|---|
| *Licences:* | | |
| Licences [under section 4 (1)] | .. | 1614 |
| Weighment | .. | 767 |
| Brokers | .. | 17 |
| *Registrations:* | | |
| Buyers and sellers | .. | 2380 |
| Buyers alone | .. | 42 |
| Sellers alone | .. | 8 |
| Authorisations issued | .. | 928 |

Malpractices in weights and measures prevail in villages; but it has been found difficult to check them as few who complained came forward with proofs. Whenever excess commissions were levied by the traders and brought to the purview of the Committee, the traders were asked to return the excess amount to the parties concerned. The weighmen were all severely warned when cases of incorrect weighments were found or reported. Many petty traders in the villages who were avoiding registration were found out and compelled to register themselves as traders.

Lastly, the Committee which has the power to revise contract forms under Rule 19 (A), have constituted a sub-committee to study the matter and evolve a suitable contract form. Suggestions from interested parties have been invited. The question is now on the anvil of the Committee.

---

The Committee hope for better progress in the years to come and they believe that such difficulties as are felt at present in their working are usual to similar services in their initial stages.

## APPENDIX C

*Questionnaire*

1. What is the average yield per acre in different districts of the Presidency for a period of 20 years, *i.e.*, from 1919 to 1940 ?

2. How much of total production of the Presidency is being retained in the villages and for what purposes ?

3. How much of total production is being pressed
   (1) by Village Chekkus (ghanis),
   (2) by Presses ;
   (3) by Expellers.

4. To which foreign markets do our ports export from 1920 ?

5. Is there any import of groundnut into the Presidency from outside areas ? Mention their quantity in respect of years from 1920 onwards.
   (b) Why is it imported? Give reasons.
   (c) What happens to this imported quantity?

6. Is any groundnut oil imported ? Why ?

7. Is there any import of cake ? Why ?

*Quality.*

8. What are the varieties of groundnut grown and in what areas ?

9. (*a*) Which kind yields maximum oil ?
   (*b*) What is the average yield and total production of each variety ?

*Prices.*

1. Is there any provision for market intelligence ?

2. Record the Port prices and market prices of Cuddalore and Madras from 1919-41.

3. Prices of London Market, German, Marseilles and other Continental markets.

4. Get contract forms—fixed and unfixed—from branches of Ralli, Luois Dreyfus, East Asiatic and other exporting firms dealing in groundnut.

5. What is the percentage of refraction prevalent in branch agencies of the same firms in Bombay? If possible give the contract forms.

6. What is the percentage of refraction allowed by the Home Office to the buying agencies of the above firms ?

7. What are the reasons you attribute for seasonal variations in prices ?

8. Give an idea of the cost of cultivation of an acre of Groundnut in the important growing centres of this Presidency, *viz.*, South Arcot, North Arcot and Guntur under the following heads for the irrigated as well as rain-fed crops*

*Preliminary cultivation*

Number of ploughing, at what rate?

*Manures and manuring*

Number of cart loads of what manure and at what rate ? (including cart hire.)

Charges for spreading the manure.

*Seed and sowing.*

Number of measures of pods at what cost?

Dibbling the seeds at so many coolies at what rate ?

*After cultivation*

Number of hoeings and weedings, by how many coolies and at what rate ?

*Irrigation*

Number of irrigations and cost of each.

**N.B.*—If Groundnut is sown as a mixed crop, say how much of the cost under each item should be allotted to Groundnut ?

*Charges after harvesting*

9. Cost of winnowing of a bag of Groundnut or the produce of one acre approximately.

10. *Assembling* : What percentage of total produce of the Presidency brought to the market
    (*a*) by cultivators ;
    (*b*) by village merchants and money-lenders ;
    (*c*) by wholesale dealers ;
    (*d*) by crushers' buying agents ;
    (*e*) by producers' co-operative societies ;
    (*f*) by Marketing Committees.

11. *Markets* : If there are any markets, e.g. shandies, an idea of the market practices and charges collected in various markets under the following heads :—
    (*a*) Taxes and tolls ;
    (*b*) Commission and brokerage ;
    (*c*) Handling charges ;
    (*d*) Charges for other services ;
    (*e*) Charities ;
    (*f*) Quality and weight allowances ;
    (*g*) Miscellaneous.

12. 1. What are the impediments in the way of grading and standardization ?
    2. Is there any discrimination in railway rates so as to favour exports instead of favouring internal consumption ?
    3. What is the effect of storage on quality ?

4. How many crushing establishments exist in this Presidency :—

   Chekkus, Presses and Expellers.

5. What is the cost of crushing a unit of Groundnut per each method ?
6. Is there any difference in quality of the oil obtained by the different methods ?
7. What are the uses of the oil ?
8. To which places is this oil exported ?
9. What is the quantity of oil exported from 1920 onwards ?
10. Mention the price of oil from 1920 onwards.
11. Is there any adulteration of the Groundnut oil ?
12. How is it adulterated ?
13. What is the total production of oil ?

*Cake.*

1. What is the total export of cake ?
2. What are its uses internally ?
3. Is there any difference in the price of cake produced by chekkus, and expellers?
4. If it be so, mention the prices.
5. What is the railway freight for oil and cake ?

13. *Weights and measures.*

What are the weights used ?

Are they checked?

## ACKNOWLEDGMENTS

*Brown University, Rhode Island:*
- *Selected topics in function theory of a complex variable by Otto Syasz.*
- *Theory of abstract spaces by David Tamarkin*

*The Service*
*Lingnan Science Journal, Vol. 19, No. 1.*
*The Modern Student*
*The Empire Times*
*Madras Y.M.C.A. Bulletin*
*Subodin*
*Indian Swarajya*
*The Journal of the Greater India Society*
*A Journal of Indian Renaissance*
*Travaux de l'Institut Mathematique de Tbilissi I*
*Academie des Sciences de l'U. R. S. S.—Filial Georgienne*
*On the Devonian Coelacanthids of Germany with special reference to the Dermal Skeletar (Stockholm).*
*Ethnology, Folklore and Archaelogy in the U.S.S.R.*
*E. A. Weiss: Einfuhrung in die Liniengeometrie und Kinematik*
*Proceedings of the University of Durham Philosophical Society*
*Osaka Imperial University: Collected papers from the Faculty of Science*
- *Series A Mathematics Vol. V.*
- *B Physics " " "*
- *C Chemistry " " "*

*Man in India, Volume XVIII, Decr. '39*
*Spolia Zeylanica.*
*Bulletin of the Calcutta Mathematical Society.*
*Scripta Mathematica.*
*Gram Udyog Patrika.*
*Report of the South Indian National Association and Ranade Library.*
*Kungl Svenska Vetenskaspsakademiens Handlingar Tredje Serien Band 14 Nos. 1 to 3.*
1. *Das Wachstum der Korperlange des Menschen.*
2. *Studies in the Gems Astelid Banks Et Solander.*
3. *Examen Rosarum Sneciae Granskringavden Svenska Florans Rosa-Former.*

*Etudes sur un probleme de Majoration.*
*The Journal of the Madras Geographical Association.*
*Wealth and Welfare.*
*Hermathena: Literature, Science and Philosophy.*

*The Indian Historical Quarterly.*
*Annales de Universite de Paris, July-Oct. '39*
*New Indian Antiquary.*
*The Modern Education Society, Poona, Annual Report.*
*Madras Youngmen.*
*The Jaina Antiquary, Vol. IV, No. 11.*
*The Alcyonarian Genus Bathyalcyon (Stockholm) Band 16, No. 5.*
*Litorale Amphipoden des Trophischen Pazifiks Band 16, No. 6.*
*Aminoff (G) etc., Uber Die Oxydation Von Zinkblende-Einkrinstallen, An Hand Von Elektroneninterferenzen Studiert.*
*Nagaripracharani Patrika.*
*Indian Academy of Sciences—Abstracts of papers.*
*The Commercial Review.*
*The Bulletin of the Deccan College Research Institute*
*Indian photography and cinematography*
*The Rural India*
*Annals of Sri Venkatesvara Oriental Institute, Vol. I, Pt. IV.*
*The Suddha Dharma, Vol. V, No. 4.*

---


## JOURNAL OF THE UNIVERSITY OF BOMBAY

Published five times a year with original articles and abstracts of theses of Research Work done by the students and teachers of the Bombay University, in the following subjects :

No. 1. History, Economics & Sociology (July)
No. 2. Arts and Law (September)
No. 3. Physical Sciences, including Mathematics (Novr.)
No. 4. History, Economics & Sociology (January)
No. 5. Biological Sciences, including Medicine (March)

**Rates of Subscription**

| | | |
|---|---|---|
| Annual subscription for Five Issues | .. | Rs. 12 |
| „ „ Nos. 1 & 4 | .. | Rs. 5 |
| „ „ Nos. 3 & 5 | .. | Rs. 5 |
| Number Two or a Single Copy | .. | Rs. 3 |

For all kinds of University News
Subscribe to the
BOMBAY UNIVERSITY BULLETIN,
Annual Subscription : Rupee One, Post Free.

For advertisement rates and further particulars please write to :—

THE MANAGER,
*Journal of the University of Bombay,*
University of Bombay, Fort, Bombay.

## EXCHANGE LIST

*Hindustan Review.*
*Half Yearly Journal of the Mysore University.*
*Economica, London.*
*Philosophical Quarterly.*
*Reading University Gazette.*
*Mysore Economic Journal.*
*Chemical Abstracts, Easton Pa.*
*The Punjab University Gazette.*
*Journal of the Bombay University.*
*Quarterly Journal of the Mythic Society.*
*Publications by the Oriental Library, Baroda.*
*Publications by Kungl. Universitetes Bibliotek, Uppsala, Sweden.*
*Publications by Tohoku Imperial University, Sendai, Japan.*
*Journal of the Madras University.*
*Bulletin de l'Ecole Francaise d'Extreme-Orient—Hanoi (Indo-China).*
*Djwa—Java-Institute, Jogjakarta, Java.*
*Varendra Research Society, Rajshahi, Bengal—Annual Report and Monographs*
*Quarterly Journal of the Kannada Literary Academy.*
*Journal of the Andhra Historical Research Society.*
*Indian Culture.*
*Scripta Mathematica.*
*Indian Historical Quarterly, Calcutta.*
*Journal of the Bombay Branch of the Royal Asiatic Society.*
*Review of Philosophy and Religion.*
*Publications of the U.S.S.R. Society for Cultural relations with foreign countries, Russia.*
*Proceedings of the Durham Philosophical Society, Newcastle.*
*Collected papers from the Faculty of Science, Osaka.*
*Bulletin of the Calcutta Mathematical Society.*
*Science and Culture, Calcutta.*
*Indian Co-operative Review, Madras.*
*Epigraphica Indica.*
*Spolia Zeylanica.*
*Publications of the R. Swedish Academy of Sciences, Stockholm.*
*Bijdragen Tot De Taal, Land-En Volkenkunde Van Nederland Indie-s-Gravenhage.*
*Monthly Weather Report, Poona.*

*Scientific Reports of the Imperial Institute of Agricultural Research.*
*The Aryan Path.*
*Indiana.*
*Vishwa Vani—A journal of Indian Renaissance.*
*Journal of the Madras Geographical Association.*
*Man in India*
*The Poona Orientalist*
*Publications by the Industrial Intelligence and Research Bureau, Simla*
*The Mathematics Teacher, New York.*
*Duke Mathematical Journal*
*Publications of the Brown University, U.S.A.*
*Transactions of Tbilissian Mathematical Institute, Russia*
*Lingnan Science Journal*
*London University Gazette*
*The Adyar Library Bulletin.*
*The Indian Historical Quarterly.*
*The Vedanta Kesari.*
*Tamil Pozhil.*
*Annales de l'University de Paris.*
*The Bulletin of the Deccan College Research Institute*
*Indian photography and cinematography*
*The Journal of the Tanjore Sarasvathi Mahal Library.*
*The Visva Bharati Quarterly.*
*Journal of the U. P. Historical Society.*

# UNIVERSITY PUBLICATIONS

| Names of Publications. | Author. | Price. |
|---|---|---|
| 1. Factory Labour in India | Prof. A. Mukhtar .. | 3 0 0 |
| 2. Bhoja Raja | Prof. P. T. Srinavasa Ayyangar .. | 1 8 0 |
| 3. Swaramelakalanidhi | Mr. M. S. Ramaswami Ayyar | 2 0 0 |
| 4. Naveena Tarkam | Mr. K. R. Applachariar .. | 2 0 0 |
| 5. Text and commentary of *Tattvavibhavana* by Parameswara, a commentary on Vacaspati Misra's Tattvabindu. | Mr. V. A. Ramaswami Sastriar | 3 0 0 |
| 6. Sri Mukundamala | Prof. K. Rama Pisharoti .. | 3 0 0 |
| 7. Svarasiddhanta Candrika | Srinivasayajvan. Edited by Mr. K. A. Sivaramakrishna Sastri .. | 5 0 0 |
| 8. Acoustics | Mr. R. K. Viswanathan .. | 1 8 0 |
| 9. Pari Pattu | Vidvan R. Raghava Ayyangar | 2 0 0 |
| 10. Trimsacchloki | | |
| 11. The Distributive Co-operation in India | Mr. V. G. Ramakrishna Ayyar | 1 0 0 |
| 12. Nyāyakuliśa | Edited by Prof. R. Ramanujachari and Pandit K. Srinivasacharya. | |
| 13. Nitimala | Do. | |
| 14. A Text-book in Tamil on Chemistry, Vol. I. | Mr. N. Ananthavaidyanathan. | 3 0 0 |
| 15. The Madras Agriculturists' Relief Act—A study. | Dr. B. V. Narayanasvami Nayudu and P. Vaidyanathan, M.A. | |
| 16. Report on the Working of Prohibition in Salem. | C. Jagannathachari, M.A., M.Litt. | |
| 17. The Madras General Sales Tax Act—A Study. | Dr. B. V. Narayanasvami Nayudu and S. Tiruvengadathan | 1 8 0 |
| 18. Educational Psychology in Tamil | Prof. K. R. Applachari and Prof. R. Ramanujachari | 1 0 0 |
| 19. Road Rail Transport | S. R. N. Badri Rao, M.A., M.Litt. | 5 0 0 |
| 20. A Text-book in Tamil on Physics, Vol. I. | Mr. R. K. Visvanathan, M.A. | |

**For copies apply to :—The Registrar, Annamalai University, Annamalainagar.**

21. The University Journal. Editor Dr. B. V. Narayanaswami Naidu
**Annual Subscription Rs. 7-0-0 (Internal) 10s. (Foreign)**

*In the Press* :—

A Text-book in Tamil on Chemistry (Vol. II). Mr. N. Anantavaidyanathan.
A Text-book in Tamil on Physics. (Vol. II). Mr. R. K. Visvanathan.
The History of Gingee. Rao Saheb Prof. C. S. Srinivasachariar.
The History of Tamil Literature. Vidwan R. Raghava Ayyangar.
Siddhitraya. Prof. R. Ramanujachari and Pandit K. Srinivasacharya.
Vedārthasaṁgraha. Do. Do.

PUBLICATIONS

OF

# The Inter-University Board, India.

| | | |
|---|---|---|
| 1. | Handbook of Indian Universities .. | 2 0 0 *or* 3s. 6*d*. |
| 2. | Facilities for Oriental Studies and Research at Indian Universities .. | 0 8 0 |
| 3. | Facilities for Scientific Research at Indian Universities .. | 0 12 0 |
| 4. | Bulletin of the Inter-University Board, India, No. 1 to 13 .. | 1 0 0 *each* |
| 5. | Biological Outlook on life and its Problems.—By J. Arthur Thomson, M.A., LL.D., Regius Professor of Natural History, University of Aberdeen .. | 0 2 0 |
| 6. | Second, Third and Fourth Conference of Indian Universities .. | 1 0 0 *each* |
| 7. | Training of Teachers in Indian Universities .. | 0 8 0 |
| 8. | Bibliography of Doctorate Theses in Science and Arts accepted by Indian Universities from January, 1930 .. | 0 8 0 |
| 9. | Annual Report of the Inter-University Board for 1938-39 .. | 1 0 0 |

POSTAGE AND V. P. CHARGES EXTRA.

*Available from*

THE BANGALORE PRESS,
"LAKE VIEW"
*Mysore Road, Bangalore City.*

# MYSORE ECONOMIC JOURNAL.

The only Journal of its kind published regularly on the 7th of each month for over twenty years. Has a number of contributors and reviewers attached to it. Bright and topical in its contents, it has ever stood out for progressive and suggestive comments on public affairs and well being. Sir Roper Lethbridge called it the "Most admirable Journal". Annual subscription Rs. 6.

From the Book Department, books on economic matters can be always ordered. The following books are available for sale from stock:

PLANNED ECONOMY FOR INDIA by Sir M. Visvesvaraya, K.C.I., LL.D. Price Rs. 6.

MADURA SOURASHTRA COMMUNITY by K. R. R. Sastry, M.A., M.L., F.R. ECON. S. Price Re. 1.

INDIAN CASTE SYSTEM by C. Hayavadana Rao, B.A., B.L., F. R. ECON. S. Price Re. 1.

STUDIES IN RURAL ECONOMICS by S. Kesava Iyengar, M.A. Price Rs. 8.

TOWARDS NATIONAL SELF SUFFICIENCY by Dr. P. J. Thomas, M.A., B.LITT., PH.D. Price As. 4.

MYSORE GAZETTEER (3 VOLS.). Edited by C. Hayavadana Rao, B.A., B.L. Price per set Rs. 20. Can also be had in parts at prices varying from Rs. 2 to Rs. 8 per volume.

*Postage extra in all cases*

*Apply to:—*

MANAGER, "Mysore Economic Journal",
No. 19, Gundopunt Buildings, Siddicutta,
BANGALORE CITY.

# THE ADYAR LIBRARY

*Director*: Dr. G. Srinivasa Murti, B.A., B.L., M.B. & C.M., Vaidyaratna.

*Jt. Director and Curator for Western Section*: Bhikshu Arya Asanga.

*Curator for Eastern Section*: Prof. C. Kunhan Raja, M.A., D.PHIL. (Oxon.).

---

# BRAHMAVIDYA

## THE ADYAR LIBRARY BULLETIN

APPEARING FOUR TIMES A YEAR.

*Editor*: PROF. C. KUNHAN RAJA, M.A., D.PHIL. (OXON.)

*Rates of Subscription*:

Life Subscription Rs. 100
or $ 50
or £ 10

| | | Per Annum | Single Copy |
|---|---|---|---|
| India & Ceylon | .. | Rs. 6 | Rs. 2–8 |
| U. S. A. | .. | $ 3 | $ 1·25 |
| British Empire | .. | Sh. 12 | Sh. 5. |
| Other Countries | .. | Rs. 9 | Rs. 3–8 |

*All Communications to be addressed to*:

THE DIRECTOR,
*Adyar Library*,
Adyar, Madras, S., India.

# THE VEDANTA KESARI

A high class monthly devoted to the solution of spiritual problems, and to the study of religion, philosophy and culture of all countries, from the liberal and catholic point of view embodied in the life and teachings of Ramakrishna-Vivekananda.

It has been in existence from 1914, and publishes articles, both popular and learned, from the pen of leading thinkers and writers of the East and the West. Has circulation in India, Ceylon, F.M.S., U.S.A. and Europe.

SUBSCRIPTION : *Inland Rs. 3 ; Foreign $ 2 or Sh. 8, per annum. Its subscribers get several of our publications at concession rate.*

*Apply to :—*

**The Manager**

**VEDANTA KESARI**

**Mylapore, Madras.**

## RATES OF ADVERTISEMENT

| Particulars. | Per issue. Rs. a. p. | Per two issues. Rs. a. p. |
|---|---|---|
| Back Cover | 15 0 0 | 28 0 0 |
| Inside Back Cover | 10 0 0 | 18 0 0 |
| Inside Page | 8 0 0 | 15 0 0 |
| Inside Half Page | 4 0 0 | 8 0 0 |

## THE ARYAN PATH

*Editor:* Sophia Wadia,

**STANDS FOR IDEALISTIC AND CULTURAL AIMS.**

**IDEALS free from Sectarianism. DISCUSSIONS free from Politics. CULTURE free from National or Racial Bias.**

Principal Contents for July:

THE BROTHERHOOD OF RELIGIONS . Editorial
SWEDISH IDEALISM & RELIGIOSITY: I.—THE PHILOSOPHERS .. By Alf Ahlberg
SONG OF CHEER .. By Geoffrey Johnson
OF AESTHETICS: INDIAN & CHRISTIAN SCHOLASTIC THEORIES: SOME PARALLELISMS .. By O. C. Gangoly
THE GOD IDEA .. By Hervey Wescott
THE WILL TO LIVE .. By R. S. Thomas
VACCINATION IS A SUPERSTITION .. ..
THE EVOLUTION OF INDIAN MYSTICISM: II.—THE WAY OF THE MYSTIC .. By K. S. Ramaswami Sastri
THE BUSINESS OF THE SCHOOL .. ..
NEW BOOKS AND OLD ..
CORRESPONDENCE ..

Annual Subscription Rs. 6. Single Copy As. 12.

**J. O. Department. THE ARYAN PATH OFFICE**
**"Aryasangha", Malābar Hill, Bombay.**


Printed and published by G. Srinivasachari, B.A., at G. S. Press, 21, Narasingapuram Street, Mount Road, Madras.